| ATYDPLTGYSFDGFDI (SEQ ID NO: 2153) | ATYDFLIGISFDGFDI (SEQ ID NO: 2155)<br>TERNYDH TGYYWPSMDV (SEO ID NO: 2940) | ATYDPLTGYSFDGFDI (SEQ ID NO: 2153) | APYDIL TGYSDYYGMDV (SEQ ID NO: 2968) | DSDARLAALDAFDI (SEQ ID NO: 2978) | GQFGVLPNYYYHMDV (SEQ ID NO: 2943) | DIKRYNSNWPYYDYYMDV (SEQ ID NO: 2726) | DKQYYDILTGDPVEGGMDV (SEQ ID NO: 2889) | ATYDPLTGYSFDGFDI (SEQ ID NO: 2153) | AGSSLVTYGTDV (SEQ ID NO: 2825) | SDDYDILTGNYVGSLLDY (SEQ ID NO: 2758) | DGRLSYDILTGY YARDY YGMDV | (SEQ ID NO: 2912) | ATYDPLTGYSFDGFDI (SEQ ID NO: 2153) | DQNHPIYDILTGYYVPTGPLELKN | (SEQ ID NO: 2845) | EVRNYDLLTRSYLAGPLDN (SEQ ID NO: 2751) | DMGYDILTGYYGAFDI (SEQ ID NO: 2946) | DYYDVLTGFSLDGMDV (SEQ ID NO: 2829) | DHYDVL TGSYLQAFDV (SEQ ID NO: 2728) | GRYDFL TGYLRNFDY (SEQ ID NO: 2731) | GHYDIL TGYYFGFDY (SEQ ID NO: 2886) | DMKVYYKYALDV (SEQ ID NO: 2823) | DLRYDILTGYHDAFDI (SEQ ID NO: 2890) | SSPPKWYDALTGHSSYHSAMDV (SEQ ID NO: 2159) | HRRARVVVPVPGAMDV (SEQ ID NO: 2930) | DGSYDILTGYYIDNYMDV (SEQ ID NO: 2154) | RSMIVVTTAPYDAFDL (SEQ ID NO: 2785) | DTVRSGGMDV (SEQ ID NO: 2804) | DGSYDILTGYYIDNYMDV (SEQ ID NO: 2154) | SGPGWFDP (SEQ ID NO: 2870) | SGPGWFDP (SEQ ID NO: 2870) | ELGSSIVGATTGALDM (SEQ ID NO: 2852) | GDYDLLTGYPAECFQI (SEQ ID NO: 2854) | DNYDILTGYSRRFDP (SEQ ID NO: 2942) |
|------------------------------------|--|------------------------------------|--------------------------------------|----------------------------------|-----------------------------------|--------------------------------------|---------------------------------------|------------------------------------|--------------------------------|--------------------------------------|--------------------------|-------------------|------------------------------------|--------------------------|-------------------|---------------------------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|------------------------------------|--------------------------------|------------------------------------|--|------------------------------------|--------------------------------------|------------------------------------|------------------------------|--------------------------------------|----------------------------|----------------------------|------------------------------------|------------------------------------|-----------------------------------|
| ,                                  | 114 AIY<br>116 TEG   |                                    |                                      |                                  | 113 GQF                           |                                      |                                       | •                                  |                                |                                      | 120 DGF                  | (SE               | •                                  | 122 DQI                  | (SE               | 117 EVF                               | 114 DM                             |                                    |                                     |                                    |                                    |                                |                                    |  |                                    |                                      |                                    |                              |                                      |                            |                            |                                    |                                    | 113 DN                            |
| 1                                  | 99   | 1 1                                | 101 - 117                            | 99 - 1                           | 99 - 1                            | 99 - 1                               | ,                                     | 99 - 1                             |                                | 1                                    | 99 - I                   |                   | 1                                  | 99 - 1                   |                   | 99 - 1                                | 99 - 1                             | 99 - 1                             | 98 - 1                              | 100 - 114                          | 99 - 1                             | 99 - 1                         | 99 - 1                             | 99 - 1                                   | 99 - 1                             | 96 - 116                             | 100 - 115                          | 99 - 1                       | 99 - 1                               | 99 - 1                     | 99 - 1                     |                                    | 1                                  | 99 - 1                            |
| 50 - 66                            | 50 - 66  | 50 - 66                            | 50 - 68                              | 50 - 66                          | 50 - 66                           |                                      | 1                                     | 99 - 09                            | 50 - 66                        | 1                                    | 20 - 66                  |                   | 50 - 66                            | 50 - 66                  |                   | 50 - 66                               | 50 - 66                            | 50 - 66                            | 50 - 65                             | 52 - 67                            | 50 - 66                            | 50 - 66                        | 50 - 66                            | 20 - 66                                  | 50 - 66                            | 20 - 66                              | 51 - 67                            | 50 - 66                      | 50 - 66                              | •                          | 1                          | 49 - 65                            | 1                                  | 20 - 66                           |
| 1                                  | 26 - 35  | 20 - 35<br>26 - 35                 | ı                                    | 1                                | 1                                 | 26 - 35                              | 26 - 35                               | 26 - 35                            | 26 - 35                        | 1                                    | 26 - 35                  |                   | 26 - 35                            | 6 - 35                   |                   | 26 - 35                               | 26 - 35                            | 26 - 35                            | 26 - 35                             | 26 - 37                            | 26 - 35                            | 26 - 35                        | 26 - 35                            | 26 - 35                                  | 26 - 35                            | 1                                    | 26 - 36                            | 1                            | 26 - 35                              | 1                          | ì                          | 26 - 34                            | 1                                  | 26 - 35                           |
|                                    |  | - 121 -                            | 128                                  |                                  |                                   |                                      |                                       |                                    |                                | _                                    | - 131 2                  |                   | 125                                | 133                      |                   | - 128                                 | - 125 2                            |                                    |                                     | 125                                | 124                                | 121                            |                                    |  |                                    |                                      |                                    |                              |                                      |                            |                            |                                    |                                    | - 124                             |
| 240 1                              | 240 1  | 239 1                              | 4                                    | 238 1                            | 239 1                             | -                                    | 243 1                                 | 240 1                              | 236 1                          | 242 1                                | 246 1                    |                   | 240 1-                             | 248 1-                   |                   | 240 1                                 | 242 1                              | 242 1                              | 237 1                               | 242 1                              | 241 1                              | 237 1                          | 242 1                              | 247 1                                    | 241 1                              | 239 1                                | 242 1                              | 235 1                        | 239 1                                |                            | 233 1                      |                                    |                                    | 242 1                             |
| 231 -                              | 1  | 229 -                              |                                      | 228 -                            | - 1                               | 1                                    | 234 -                                 | 231 -                              | 227 -                          |                                      | 237 -                    |                   | 231 -                              | 239 -                    |                   | 230 -                                 | 232 -                              | 232.                               | 230 -                               |                                    |                                    |                                |                                    |  | 231 -                              |                                      | 232 -                              | 225 -                        | 229 -                                |                            | 224 -                      | 231 -                              |                                    | 233 -                             |
|                                    | 1  | ) - 196<br>198                     |                                      |                                  | - 1                               | 1                                    | - 1                                   | 2 - 198                            | 1                              | - 1                                  | 8 - 204                  |                   | 2 - 198                            | 0 - 206                  |                   | 1 - 197                               |                                    |                                    |                                     |                                    |                                    |                                |                                    | 9 - 205                                  | 2 - 198                            | 0 - 196                              | 3 - 199                            | 6 - 192                      | 0 - 196                              | 5 - 191                    | 5 - 191                    | 2 - 198                            | 1 - 197                            | 2 - 198                           |
|                                    | 176 192  |                                    |                                      |                                  |                                   |                                      |                                       | 176 19.                            |                                |                                      | 182 19                   |                   | 76 192                             |                          |                   |                                       |                                    |                                    |                                     |                                    |                                    |                                | 177 193                            |  |                                    |                                      | 177 19                             |                              |                                      |                            |                            |                                    | 175 19                             |                                   |
| 1                                  | 163 - 17   | 1                                  |                                      | 1 1                              | 1                                 | - 1                                  | - 1                                   | 1                                  | 1                              | 1                                    | 169 - 13                 |                   | 163 - 176                          | 71 - 13                  | 1                 | 1                                     | 164 - 1                            | 1                                  |                                     | 1 1                                |                                    | 1                              | 164 - I                            | - 1                                      | - 1                                | 164 - 1                              | 65 - 1                             | 158 - 1                      | 164 - 1                              | 1                          | ı                          | - 1                                | 1                                  | 164 - 1                           |
|                                    |  | 250 1                              |                                      |                                  |                                   |                                      |                                       |                                    |                                | •                                    | 257 1                    |                   | 251 1                              | 259 1                    | <b>1</b>          |                                       | 253 1                              |                                    | 248 1                               |                                    |                                    | 248 1                          |                                    |  | 252                                | 250                                  | 253                                | 246                          | 250                                  | 244                        | 244                        | 251                                | 251 1                              |                                   |
| 1                                  | 141 - 2  | 1                                  | 1                                    | , ,                              | - 1                               | - 1                                  | 1                                     | - 1                                | 1                              | - 1                                  | 147 - 2                  |                   | 141 - 2                            | 149 - 259                | 1                 | - 1                                   | 141                                |                                    | _                                   |                                    | 1                                  |                                | 141                                | - 1                                      | 141 -                              | 143 -                                | 142 -                              | 135 -                        | 143 -                                | 133 -                      | 133 -                      | 140 -                              | 141 -                              | 1                                 |
| 1342                               | 1343   | 1344                               | 1345                                 | 1340                             | 1348                              | 1349                                 | 1350                                  | 1351                               | 1352                           | 1353                                 | 1354                     |                   | 1355                               | 1356                     | 200               | 1357                                  | 1358                               | 1350                               | 1360                                | 1361                               | 1367                               | 1363                           | 1364                               | 1365                                     | 1366                               | 1367                                 | 1368                               | 1369                         | 1370                                 | 1371                       | 1372                       | 1373                               | 1374                               | 1375                              |
| I043F01                            | I043F04  | I043F12                            | IO45HU/<br>IO44411                   | 1044A11<br>1044B11               | 1044C09                           | 1044C10                              | 1044D03                               | 1044D09                            | 1044E07                        | I044E11                              | I044F07                  |                   | 1044G02                            | 1044G07                  | ) O O H           | 1044H01                               | 1050401                            | 1050B12                            | 105001                              | 105000                             | 1030C0s                            | 1050E01<br>1050E10             | 1050E18<br>1050H08                 | I051A04                                  | I051A08                            | I051A12                              | 1051B08                            | 1051C06                      | I051G12                              | I055A05                    | I055A11                    | I061A03                            | I061A04                            | I061A08                           |

| 1061A09       1376         1061B07       1377         1061B07       1378         1061B12       1378         1061B12       1381         1061D01       1382         1061D03       1383         1061D04       1384         1061D07       1388         1061D09       1389         1061D09       1389         1061E01       1399         1061E02       1399         1061E03       1399         1061F01       1399         1061F01       1399         1061F01       1399         1061F01       1399         1061G01       1399         1061G01       1399         1061G03       1399         1061G01       1400         1064A01       1401         1064B01       1404         1064B01       1405         1064D02       1409         1064E01       1410         1064E01       1410 |
|---|
|   |

| _         | ,         | VLTNYDILTGYYREDAFDM (SEQ ID NO: 2939) | GMGDHYGMDV (SEQ ID NO: 2161) | DRGASNYDILTGYYAPAQGVAFDI | (SEQ ID NO: 2969) | EGAHYDILTGHNYYHYGMDV (SEQ ID NO: 2747) | ETRKYTSSPPYNYYYMDV (SEQ ID NO: 2736) | AGSSLMTYGTDV (SEQ ID NO: 2773) | DQHDILTGVYYGMDV (SEQ ID NO: 2921) | •         | DYPGSEYDILTGYLFGYYYYGMDV<br>(SEO ID NO: 2926) | ATYDPLTGYSFDGFDI (SEQ ID NO: 2153) | ARRVGVLGGKNAFEI (SEQ ID NO: 2765) | DQHDILTGGYYGMDV (SEQ ID NO: 2894) | ATYDPLTGYSFDGFDI (SEQ ID NO: 2153 |           | _         | _         | •         | GVVWVAYGDVGIYGFDV (SEQ ID NO: 2937) |           | _         |          |           | _        | 1        |          | _         |          | -        | '        |          |         | SSPPKW Y DALIGDSS Y HSAIMD V (SEQ ID INO: 2103) |
|-----------|-----------|---------------------------------------|------------------------------|--------------------------|-------------------|--|--------------------------------------|--------------------------------|-----------------------------------|-----------|---|------------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------|-----------|-----------|-----------|-------------------------------------|-----------|-----------|----------|-----------|----------|----------|----------|-----------|----------|----------|----------|----------|---------|---|
| 1         | 98 - 116  | 99 - 117                              | 99 - 108                     | 99 - 122                 |                   | 102 - 121                              | 99 - 116                             | 99 - 110                       | 99 - 113                          | 99 - 108  | 100 - 123                                     | 99 - 114                           | 99 - 113                          | 99 - 113                          | 99 - 114                          | 101 - 119 | 1         | ı         | 1         |                                     | 99 - 113  | 99 - 116  | 99 - 113 | 101 - 113 | 99 - 114 | 99 - 114 | 99 - 116 | 100 - 115 | 99 - 111 | 99 - 108 | 99 - 114 | 99 - 114 | 1       | 99 - 120  |
| 50 - 66   | 50 - 65   | 20 - 66                               | 50 - 66                      | 50 - 66                  |                   | 52 - 69                                | 50 - 66                              | 20 - 66                        | 50 - 66                           | 50 - 66   | 50 - 67                                       | 50 - 66                            | 50 - 66                           | 20 - 66                           | 99 - 09                           | 20 - 68   | 20 - 66   | 1         | 20 - 66   | 20 - 66                             | 99 - 09   | 20 - 66   | 20 - 66  | 50 - 68   | 20 - 66  | 20 - 66  | 20 - 66  | 51 - 67   | 20 - 66  | 50 - 66  | 20 - 60  | 50 - 66  | ì       | 20 - 66   |
| 26 - 35   | - 1       | 26 - 35                               | 26 - 35                      | 26 - 35                  |                   | 26 - 37                                | 26 - 35                              | 26 - 35                        | 26 - 35                           | 26 - 35   | 26 - 35                                       | 26 - 35                            | 26 - 35                           | - t                               | 26 - 35                           | 26 - 35   | 1         | 26 - 35   | 1         | · ·                                 | 1         | 1         |          | 26 - 35   | 1        | 1        |          | 1         |          | 26 - 35  | 97       | 26       | 1       | 26 - 35   |
| 1 - 127   | 1 - 127   | 1 - 128                               | 1 - 119                      | 1 - 133                  |                   | 1 - 132                                | 1 - 127                              | 1 - 121                        | 1 - 124                           | 1 - 119   | 1 - 134                                       | 1 - 125                            | 1 - 124                           | 1 - 124                           | 1 - 125                           | 1 - 130   | 1 - 119   | 1 - 121   | 1 - 127   | 1 - 126                             | 1 - 124   | 1 - 127   | 1 - 124  | 1 - 124   | 1 - 125  | 1 - 125  | 1 - 127  | 1 - 126   | 1 - 122  | 1 - 119  | 1 - 125  | 1 - 125  | 1 - 125 | 1 - 131   |
| 232 - 243 | 233 - 242 | 234 - 243                             | 225 - 234                    |                          |                   | 238 - 247                              | 233 - 242                            | 226 - 236                      | 1                                 | 224 - 234 | 239 - 249                                     | 231 - 240                          | 230 - 239                         | 229 - 239                         | 231 - 241                         | - 1       | 224 - 234 | 227 - 237 | 1         | 233 - 241                           | 229 - 240 | 233 - 243 | 1        | 1         | 1        | 1        | 1        | 1         | 1        | 1        | 1        |          | 1       | 237 - 248                                       |
| - 199 2   | - 200     | - 201                                 | - 192                        | - 206                    |                   | - 205                                  | - 200                                | - 193                          | - 196                             | - 191     | - 206   | - 198                              | - 197                             | - 196                             | - 198                             | - 202     | - 191     | - 194     | - 200     | - 200                               | - 196     | - 200     | - 193    | - 197     | - 194    | - 198    | - 196    | - 198     | - 195    | - 191    | - 198    | - 198    | - 196   | - 204   |
| 7 193     |           |                                       |                              |                          |                   | 3 199                                  |                                      |                                |                                   |           |   | 6 192                              | 5 191                             | 4 190                             | 6 192                             |           |           |           |           |                                     |           |           |          | 5 191     |          |          |          | . ,       |          |          |          |          | 4 190   | • •   |
| 5 - 177   | •         | 166 - 179                             |                              | 1                        |                   | 0 - 18                                 | 165 - 178                            | 159 - 171                      | 164 - 174                         | 1         | 2 - 184                                       | 3 - 176                            | 162 - 17                          | 162 - 174                         | 3 - 176                           | 168 - 180 | 7 - 169   | 160 - 172 | 166 - 178 | 5 - 178                             |           | 6 - 178   | 51 - 171 | 162 - 17  |          |          | Ψ.       | 1         | 1        | ì        | 1        | 63 - 176 | 1       | .70 - 182                                       |
| 165       | 253 16    |                                       |                              |                          |                   | 58 170                                 |                                      |                                |                                   |           | 260 172                                       | 51 163                             | _                                 |                                   |                                   |           |           | 248 16    |           |                                     |           |           |          |           |          |          | 250 16   | 252 16    | -        |          |          | _        |         | 259 17  |
| 143 - 25  | 143 - 25  | 144 - 25                              | 135 - 245                    | 149 - 259                | i                 | 148 - 258                              | 143 - 25                             | - 1                            | 1                                 | 1         | 150 - 20                                      | 141 - 251                          | t                                 | 1                                 | 1                                 | •         | 1         | 1         |           | 1                                   | - 1       |           | 140 - 2  | 1         | 1        | 1        | 1        | 1         | 1        | 1        | 1        | 1        | 1       | 147 - 2   |
| 1448      | 1449      | 1450                                  | 1451                         | 1452                     | 1                 | 1453                                   | 1454                                 | 1455                           | 1456                              | 1457      | 1458  | 1459                               | 1460                              | 1461                              | 1462                              | 1463      | 1464      | 1465      | 1466      | 1467                                | 1468      | 1469      | 1470     | 1471      | 1472     | 1473     | 1474     | 1475      | 1476     | 1477     | 1478     | 1479     | 1480    | 1481  |
| 1066G12   | 1066H04   | I067A07                               | T067A11                      | 1067B08                  |                   | 1067C08                                | 1067C09                              | I067D07                        | 1067E01                           | 1067E06   | I067E07                                       | 1067E11                            | 1067G03                           | 1067G05                           | 1067G12                           | 1067H05   | 1067H06   | I068C09   | 1068G03   | 1068G04                             | I068G07   | 1068G08   | I070F07  | 1070G05   | I070H02  | I071A01  | I071A03  | I071B08   | I071E01  | I071F11  | I071G11  | I071H08  | I074A02 | I074A08   |

| 99 - 117 DKTLGDQLVEAYYYDGMDV (SEQ ID N<br>99 - 117 LGRTSRDLLTGYHFYNMDV (SEQ ID NC<br>99 - 113 DDYDILTGSLYYFDS (SEQ ID NO: 2803)<br>99 - 116 GTGYDILTGYYMGSAFDQ (SEQ ID NO: 2739)<br>99 - 113 DRADILTGYNDAFDI (SEQ ID NO: 2739)<br>99 - 112 RYGDPFYYYYYMNV (SEQ ID NO: 2755) | 99 - 116<br>99 - 115<br>99 - 116 | 66 99 - 106 DQGRYLDL (SEQ ID NO: 2175)<br>66 99 - 106 DQGRYLDL (SEQ ID NO: 2175)<br>65 98 - 113 PT (PLATTGAL)DM (SEQ ID NO: 2174) | 99 - 116           | 66 99 - 113 SDYDILTGYYWVPAV (SEQ ID NO: 2812)<br>66 99 - 120 GREDTDKVKPWDRYFHYYYMDV | (SEQ ID NO: 2835)<br>56 99 - 106 DOGRYLDL (SEQ ID NO: 2175) | 99 - 116 | 99 - 114 | 55 98 - 113 ELGLSIVGALIGALDM (SEQ ID NO: 21/4).<br>56 99 - 116 GTGYDILTGYYMGSAFDQ (SEQ ID NO: 2800) | 101 - 121 | 56 99 - 116 GRGYDVLTGYFTGSPLDY (SEQ ID NO: 2881)<br>55 08 - 113 FTGFSTVGATTGALDM (SEQ ID NO: 2174) | 98 - 113           | 99 - 106 | 99 - 115 | 56 99-117 EQGYDILI'GYYPEGGWFDF (SEQ ID NO: 2834)<br>57 100 114 AGYDITTGYYPEYEDS (SEO ID NO: 2757) | 99 - 117                        | 99 - 113 | 99 - 106 DQRKAQDI (SEQ ID NO: 2779) | 99 - 118  | 66 99 - 106 DQGRYLDL (SEQ ID NO: 2173)<br>66 99 - 106 DQGRYLDL (SEQ ID NO: 2175) |
|---|----------------------------------|---|--------------------|---|---|----------|----------|---|-----------|--|--------------------|----------|----------|---|---------------------------------|----------|-------------------------------------|-----------|--|
| 50 - 66<br>50 - 66<br>50 - 66<br>50 - 66<br>50 - 66<br>50 - 66  | 50 - 66<br>50 - 66<br>50 - 66    | 50 - 66<br>50 - 66<br>49 - 65   | 50 - 66            | 50 - 66<br>50 - 66  | 99 - 09   | 50 - 66  |          | 49 - 65<br>50 - 66  | 52 - 68   | 50 - 66<br>49 - 65   | 49 - 65            | 20 - 66  | 20 - 66  | 50 - 66   | 50 - 66                         | 50 - 66  | 50 - 66                             | 50 - 66   | 20 - 06<br>50 - 66   |
| 1 1 1 1 1   | 1 1 1                            | 26 - 35<br>26 - 35<br>26 - 35   | 1 1                | 26 - 35<br>26 - 35  | 26 - 35   | 1        | 1        | 26 - 34<br>26 - 35  | 28 - 37   | 26 - 35  | 26 - 34            | 26 - 35  | 1        | 26 - 35   | 1                               | 1        | 26 - 35                             | 1         | 26 - 35<br>26 - 35   |
| 1 - 128<br>1 - 128<br>1 - 124<br>1 - 127<br>1 - 124<br>1 - 123  | 1 - 127<br>1 - 126<br>1 - 127    | 1 - 117<br>1 - 117<br>1 - 124   |                    | 1 - 124<br>1 - 131  | 1 - 117   | 1 - 127  | 1 - 125  | l - 124<br>l - 127  | 1 - 132   | 1 - 127  | 1 - 124            | 1 - 117  | 1 - 126  | 1 - 128   | $\frac{1}{1} - \frac{123}{128}$ | 1 - 124  | 1 - 117                             | 1 - 129   | 1 - 11 /<br>1 - 117  |
| 1 1 1 1 1 1   | 1 1 1                            | 223 - 233<br>224 - 236<br>230 - 241   | 4 - 246<br>1 - 241 | 1 1   |   | î        | 1 - 241  | 230 - 240<br>232 - 242  | - 1       | 4 - 244  | i 1                | 1        | 1        | 3 - 242   | 3 F                             | ı        |                                     | 1         | .2 - 232<br>.4 - 234   |
|   |                                  | 190 223<br>191 224<br>107 230   |                    |   |   |          |          | 197 230<br>199 232  |           | 201 234  |                    |          |          | 200 233   |                                 |          |                                     |           | 189 222<br>191 224   |
| 1 1 1 1 1 1   |                                  | 184 - 1<br>185 - 1<br>101 - 1   |                    | 1 1   | 184 - 1   | 195 - 2  | 192 - 1  | 191 - 1<br>193 - 1  | 1         | 195 - 2  | 1                  | 1        | 1        | 1   | 194 - 2<br>194 - 2              | 1        | 1                                   | 1         | 185 - 1<br>185 - 1   |
| 3 - 178<br>3 - 178<br>1 - 174<br>5 - 179<br>1 - 174   | 1 1 1                            | 5 - 168<br>5 - 169<br>5 - 175   | 1 1                | 1 1   | - 168   | - 179    | 1-176    | 3 - 175<br>7 - 177  | - 184     | 5 - 179  | 1                  | 1        | 1        | 3 - 178   | 1 1                             | ì        |                                     | 1         | / - 16/<br>5 - 169   |
|   |                                  | 156<br>17 156<br>23 163   |                    |   |   |          |          | 51 163<br>53 167  |           | 5 166  |                    | •        |          |   | 168                             |          |                                     |           | 15. 15.7<br>15. 156  |
| 144 - 253<br>144 - 255<br>140 - 250<br>143 - 259<br>140 - 250<br>139 - 251  | 1 1 1                            | 133 - 244<br>133 - 247  | 1 1                | 1 1   | 1   | 1        | 1        | 140 - 251<br>143 - 253  | 1         | 143 - 255  | 1 1                | 3        | 1        | 144 - 253   | 141 - 231                       | 1        | 1                                   | 145 - 257 | 133 - 243<br>133 - 245   |
| 1482<br>1483<br>1484<br>1485<br>1486<br>1487  | 1488<br>1489<br>1490             | 1491<br>1492<br>1493  | 1494<br>1495       | 1496  | 1498  | 1499     | 1500     | 1501<br>1502  | 1503      | 1504   | 1506               | 1507     | 1508     | 1509  | 1511                            | 1512     | 1513                                | 1514      | 1515<br>1516   |
| 1074D10<br>1074E01<br>1074E02<br>1074E08<br>1074F12<br>1074H06  | 1074H07<br>1074H08<br>1075A07    | 1075B01<br>1075B04<br>1075B06   | 1075B08<br>1075B09 | I075B12   | 50.2501   | 1075D05  | I075D07  | I075D08<br>I075E01  | I075E03   | 1075E04  | 10/3E03<br>1075E10 | I075E11  | I075E12  | 1075F02   | 10/3F04<br>1075F06              | I075F07  | I075F08                             | I075F09   | 1075F10<br>1075F11   |

| GRYYDMLTRGGYFDY (SEQ ID NO: 2174)<br>GRYYDMLTRGGYFDY (SEQ ID NO: 2858)<br>RQYDLTGYYGGFDY (SEQ ID NO: 2958)<br>TDYDLTGYPMGYFDP (SEQ ID NO: 2173)<br>DQGRYLDL (SEQ ID NO: 2175) | GTGYDILTGYYMGSAFDQ (SEQ ID NO: 2800)<br>DQGRYLDL (SEQ ID NO: 2175) | DQUKTLDL (SEQ ID NO: 21/3)<br>GSGYDLLTGYFTGSPLDY (SEQ ID NO: 2766) | GYDTAMQY (SEQ ID NO: 2951) | DQGRYLDL (SEQ ID NO: 2175)<br>DRRDILTGSNFGQD (SEQ ID NO: 2913) | MGHYDIL TGYRHYGMDV (SEQ ID NO: 2831)<br>GSGYDI I TGYFTGSBI DV (SEO ID NO: 2766) |         | DQGRYLDL (SEQ ID NO: 2175) |           | ELGLSIVGALTGALDM (SEQ ID NO: 21/4)<br>GRYYDMLTRGGYFDY (SEO ID NO: 2858) |          | RFYDLLTGYSAFDS (SEQ ID NO: 2756) | GTGYDILTGYYMGSAFDQ (SEQ ID NO: 2800)<br>EFG SHYCATTGALDM (SEQ ID NO: 2174) | ELGESIVGAI I GALDIM (SEQ ID NO: 21/4)<br>GTGYDII,TGYYMGSAFDO (SEO ID NO: 2800) | EYYDVLTGLFYYMDV (SEQ ID NO: 2841) | DDRDILTNYYLEYFQH (SEQ ID NO: 2868) | GTGYDILTGYYMGSAFDQ (SEQ ID NO: 2800) | GTGYDILTGYYMGSAFDQ (SEQ ID NO: 2800) | OGRYLDL (SEO ID NO: 2175) | VHYDILTGYLWAFDI (SEQ ID NO: 2730) | ELGLSIVGATTGALDM (SEQ ID NO: 2174) | OGGRYLDL (SEQ ID NO: 2175) | GRYYDMLTRGGYFDY (SEQ ID NO: 2858)<br>GTGYDILTGYYMGSAFDQ (SEQ ID NO: 2800) |
|---|--|--|----------------------------|--|---|---------|----------------------------|-----------|---|----------|----------------------------------|--|--|-----------------------------------|------------------------------------|--------------------------------------|--------------------------------------|---------------------------|-----------------------------------|------------------------------------|----------------------------|---|
| ELGLSIV<br>GRYYDIV<br>RQYDILI<br>TDYDILI<br>DQGRYL  | GTGYDII<br>DQGRYL  | GSGYDL   | , – ,                      | DQGRYL<br>DRRDIL1  | MGHYDI  | DOGRYL  | DOGRYL                     | PYYDPL7   | GRYYDN  | LDYDILI  | RFYDLL]                          | GTGYDII  | GTGYDI   | EYYDVL                            | DDRDILI                            | GTGYDII                              | GTGYDII                              | DOGRYL                    | VHYDILI                           | ELGLSIV                            | DOGRYL                     | GRYYDM  |
| 98 - 113<br>99 - 113<br>99 - 114<br>99 - 106  |  | 1 1  | , '                        | 99 - 106<br>99 - 112   | 99 - 115  |         | 1                          | 1         | 98 - 113<br>99 - 113  | 99 - 114 | 100 - 113                        | 99 - 116   | 90 - 116<br>99 - 116   | 99 - 113                          |                                    |                                      | 99 - 116                             | 99 - 106                  |                                   | 1                                  | 99 - 106                   | 99 - 113<br>99 - 116  |
| 49 - 65<br>50 - 66<br>50 - 66<br>50 - 66<br>50 - 66   | 50 - 66  | 50 - 66  | 1 1                        | 50 - 66<br>50 - 66   | 50 - 66   | . 1     | 50 - 66                    | 50 - 66   | 50 - 66<br>50 - 66  | 50 - 66  | - 1                              | 50 - 66  | 50 - 66  | 50 - 66                           | 50 - 66                            | 20 - 66                              | 50 - 66                              | 50 - 66                   | 51 - 66                           | 49 - 65                            | 50 - 66                    | 50 - 66<br>50 - 66  |
| 26 - 34<br>26 - 35<br>26 - 35<br>26 - 35<br>26 - 35   | 26 - 35  | 26 - 35  | 1 1                        | 26 - 35<br>26 - 35   | 26 - 35   | - 1     | - 1                        |           | 26 - 34<br>26 - 35  | 1        | 26 - 37                          | 26 - 35  | 20 - 34<br>26 - 35   | 26 - 35                           | 26 - 35                            | 26 - 35                              | 26 - 35                              | - 1                       | 1                                 | 1                                  | 1                          | 26 - 35<br>26 - 35  |
| 1 - 124<br>1 - 124<br>1 - 124<br>1 - 125<br>1 - 117   |  | 1 - 127  | 1 - 119                    | $\frac{1-117}{1-123}$  | 1 - 126   |         | 1 - 117                    | 1 - 125   | 1 - 124<br>1 - 124  | 1 - 125  | 1 - 124                          |  | 1 - 124  | 1 - 124                           | 1 - 125                            | 1 - 127                              | 1 - 127                              | 1 - 117                   | 1 - 124                           | 1 - 124                            | 1 - 117                    | 1 - 124<br>1 - 127  |
| 230 - 241<br>230 - 241<br>231 - 241<br>232 - 242<br>224 - 234   | 1 1  | 234 - 243<br>234 - 243   | 1 1                        | 223 - 234<br>229 - 239   | 231 - 242   | - 1     | 1                          | 1         | 229 - 239<br>230 - 240  | 1        | ,                                | 1  | 232 - 241  | - 1                               | 1                                  | 1                                    | 232 - 242                            | - 1                       | l t                               | 1                                  | 1                          | 230 - 240<br>240 - 248  |
| - 197<br>- 197<br>- 198<br>- 199  | - 200  | - 190  | - 193                      | - 190<br>- 196   | - 198   | - 191   | - 189                      | - 199     | - 196   | - 198    | - 197                            | - 201  | - 199  | - 197                             | - 199                              | - 201                                | - 199                                | - 191                     | - 196                             | - 197                              | - 190                      | - 197   |
| . 175 191<br>. 175 191<br>. 176 192<br>. 177 193<br>. 169 185   | . 178 194<br>. 169 185   |  | , . <b>.,</b> ,            | . 168 184<br>. 174 190   | 176 192   | 169     | 167 1                      | 177 1     | 175 191   | —        | _                                | 179 195  |  |                                   | 177 193                            | 179 195                              | 178 194                              | 169 185                   | 174 190                           | Η.                                 | 168 184                    | 175 191<br>179 195  |
| 2 163 -<br>2 163 -<br>2 163 -<br>3 164 -<br>5 156 -   | 4 166 -<br>5 156 -   |  | 159                        | 5 156 -<br>0 162 -   | 3 166 -   | 156     |                            |           | 0 164 -<br>1 163 -  |          |                                  | 5 166-   | , ,,   | _                                 |                                    |                                      | 3 166-                               | '                         | 0 164                             |                                    |                            | 1 163 -<br>9 166 -  |
| 140 - 252<br>140 - 252<br>140 - 252<br>141 - 253<br>133 - 245   | 143 - 254<br>133 - 245   | 143 - 254  | 1 1                        | 133 - 245<br>139 - 250   | 142 - 253   | 1       | 1                          | 141 - 252 | 140 - 250<br>140 - 251  | 1        | 1                                | 143 - 255  | i ii   | 1                                 | 1                                  | 1                                    | 143 - 253                            | - 1                       | 140 - 250                         | 1                                  | 1                          | 140 - 251<br>143 - 259  |
| 1517<br>1518<br>1519<br>1520<br>1521  | 1522   | 1525   | 1527                       | 1528<br>1529   | 1530  | 1532    | 1533                       | 1534      | 1535<br>1536  | 1537     | 1538                             | 1539   | 1540<br>1541   | 1542                              | 1543                               | 1544                                 | 1545                                 | 1547                      | 1548                              | 1549                               | 1550                       | 1551<br>1552  |
| 1075G05<br>1075G07<br>1075G08<br>1075G11<br>1075G12   | 1075H02<br>1075H03   | 1075H08<br>1075H08   | 1076A03                    | I076A06<br>I076A07   | I076A08<br>I076B01  | I076B03 | I076B07                    | I076B08   | 10/6C04<br>10/6C10  | I076D01  | I076D08                          | I076D11  | 1076E04  | I076E07                           | 1076E09                            | I076E11                              | 1076F01<br>1076F03                   | 1076F04                   | I076F08                           | I076F10                            | 1076G09<br>107CG10         | 10/6G10<br>1076G11  |

| NGYYDILTGYYLWDYYYGMDV<br>(SEQ ID NO: 2769) | ENYDSLTGYYNYFDY (SEQ ID NO: 2971)<br>THYDILTGYYSHPLDY (SEQ ID NO: 2863) | ELGLSIVGATTGALDM (SEQ ID NO: 2174) | VPYDILTGYWGAFDV (SEQ ID NO: 2827) | GSGYDLLTGYFTGSPLDY (SEQ ID NO: 2/00) | GSGYDLLTGYFTGSPLDY (SEQ ID NO: 2/66) | VYYDILTGYNLFFDY (SEQ ID NO: 2177) | VYYDILTGYNLFFDY (SEQ ID NO: 2177) | MEYDILI'GYYGGYFDY (SEQ ID NO: 2174) | ELGESIVGATTGALDM (SEQ ID NO: 21/4) | ELGESIVGATTGALDM (SEQ ID NO: 21/4) | ELGENIVGALIGALDM (SEQ ID NO. 21/4) | ٠.        | DRGAPNYDIL I GY YAPAQGVAFDA<br>VSFO ID NO: 2176) | (SEC ID IVO: 2179)<br>DOGRYLDL (SEO ID NO: 2175) |                        | ELGLSIVGATTGALDM (SEQ ID NO: 2174) | ELGLSIVGATTGALDM (SEQ ID NO: 21/4) | ELGLSIVGATTGALDM (SEQ ID NO: 21/4) | DUKLSTULLOTIAKUI LOMDU (SEQ 10 INO. 2188)<br>SEGTIDAYD (SEO ID NO. 2178) | SECTION (3EX ID 100: 21/3) | GKG1 IDILIG1 I KUNWEDF (SECEDING: 2101)<br>TDSSVYDDI I TGVYHYFYSYMDV (SEO ID NO: 2189) | FKSAAGYFDY (SEO ID NO; 2190) | ENVIOLE TGVVGAEDI (SEO ID NO: 2185) | DOGRYLDL (SEQ ID NO: 2175) | KLGLSIVGATTGALDM (SEQ ID NO: 2186) | EGMNDFINSHHYYTMDA (SEQ ID NO: 2182) | AGNET GHIERFADT (SEQ ID NO: 2189)<br>MEYDII TGYYGGYFDY (SEO ID NO: 2179) |           |
|--|---|------------------------------------|-----------------------------------|--------------------------------------|--------------------------------------|-----------------------------------|-----------------------------------|-------------------------------------|------------------------------------|------------------------------------|------------------------------------|-----------|--|--|------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|--|----------------------------|--|------------------------------|-------------------------------------|----------------------------|------------------------------------|-------------------------------------|--|-----------|
| 99 - 119                                   | 99 - 113<br>99 - 114  | 1                                  | 1                                 | 1                                    | 1                                    | ı                                 | 99 - 113                          | 99 - 114                            | 99 - 114                           | 99 - 114                           | 99 - 114                           | 99 - 114  | 99 - 122   | 99 - 106   | 901 - 66               | 98 - 113                           | 98 - 113                           | 98 - 113                           | 1                                  | 99 - 114                           | 98 - 113                           | 99 - 120   | 99 - 107                   | 99 - 117   | 1 8                          | 00 113                              | 99 - 106                   | 98 - 113                           | 1                                   | 99 - 112<br>99 - 114   |           |
| 99 - 09                                    | 50 - 66<br>50 - 66  | 49 - 65                            | 20 - 66                           | 20 - 66                              | 20 - 66                              | 20 - 66                           | 20 - 66                           | 50 - 66                             | 20 - 66                            | 20 - 66                            | 20 - 66                            | 50 - 66   | 20 - 66  | 50 - 66  | 50 - 66                | 49 - 65                            | 49 - 65                            | 49 - 65                            | 49 - 65                            | 49                                 |                                    | 50 - 66  |                            | 51 - 66  |                              | 2 4                                 | 2 5                        |                                    | •                                   | 50 - 66  | 3         |
| 26 - 35                                    | 26 - 35<br>26 - 35  | 26 - 34                            | 26 - 35                           | 26 - 35                              | 26 - 35                              | 26 - 35                           | 26 - 35                           | 26 - 35                             | 26 - 35                            | 26 - 35                            | 1                                  | 26 - 35   | 26 - 35  | 35-36  | 26 - 35                | 26 - 34                            | 26 - 34                            | 26 - 34                            | 26 - 34                            | 26 - 34                            | 26 - 34                            | 26 - 35  | CC - 07                    | 26 - 36  | 26 - 02                      | 20 00                               | 26 - 35                    | 26 - 34                            | t                                   | 26 - 35  | 1         |
| 1 - 130                                    | 1 - 124<br>1 - 125  | 1 - 124                            | 1 - 124                           | 1 - 127                              | 1 - 127                              | 1 - 124                           | 1 - 124                           | 1 - 125                             | 1 - 125                            | 1 - 125                            | 1 - 125                            | 1 - 125   | 1 - 133  | 1 - 117  | 1-117                  | 1 - 124                            | 1 - 124                            | 1 - 124                            | 1 - 124                            | 1 - 125                            | 1 - 124                            | 1 - 131  | 1 - 118                    | 1 - 128  | 1 - 131                      | 717 - 1                             | 1 - 124                    | 1 - 124                            | 1 - 126                             | 1 - 123  | 1 - 123   |
| 236 - 246                                  | 230 - 240<br>230 - 240  | 230 - 240                          | 1                                 | 234 - 245                            | 1                                    | ı                                 | - 1                               | 1                                   | 1                                  | 1                                  | ı                                  | 1         | 238 - 248  | 224 723  | 1                      | 1                                  | 230 - 238                          | 230 - 238                          | 230 - 238                          | 229 - 239                          | 231 - 241                          | I,   | 777 - 730                  | 234 - 243  | 237 - 240                    |                                     | 230 - 239                  | 1 1                                | 233 - 243                           | 230 - 240  | ı         |
| - 203 2:                                   | - 197 2   |                                    |                                   | - 201 2                              |                                      | - 197 2                           |                                   |                                     |                                    |                                    |                                    |           | - 205 2  | 101  |                        | 195                                |                                    |                                    | - 197                              | - 196                              | - 198                              | - 204  | - 189                      | - 201  | - 204<br>5 5                 | 25                                  | - 197<br>190               | - 197                              | - 200                               | - 197  | - 198     |
| 197  | 191   | 191                                | 192                               | 195                                  | 195                                  | 191                               | 191                               | 192                                 | . 190                              | 190                                | _                                  |           | 199  | 105  | 5 4 8                  |                                    |                                    | 191                                | 191                                | 190                                |                                    | 198  | 183                        |  |                              |                                     | 191                        |                                    | ,                                   | 191  | •         |
| . 181                                      | 3 - 175   | 3 - 175                            | 3 - 176                           | 5 - 179                              | 5 - 179                              | 162 - 175                         | 2 - 175                           | 3 - 176                             | 4 - 174                            | 4 - 174                            |                                    | 1         | 1 - 183  | 150  | 156 - 168<br>156 - 168 | 163 - 173                          | 163 - 175                          | 163 - 175                          | 163 - 175                          | 164 - 174                          |                                    |  |                            |  |                              |                                     | 162 - 175                  |                                    | 1                                   | 1  | 3 - 1/0   |
| 7 165                                      | 1 163   |                                    | ' '                               | 6 166                                |                                      |                                   |                                   | 1 163                               | 0 164                              | -                                  |                                    |           | 9 171  |  |                        |                                    |                                    |                                    |                                    |                                    |                                    |  |                            |  |                              |                                     |                            |                                    |                                     |  | 105       |
| 146 - 257   169 - 181                      | [40 - 25]   |                                    | 140 - 252                         | 143 - 256                            | 143 - 256                            | - 1                               | 1                                 | 1                                   | 141 - 250                          | 141 - 250                          | 141 - 250                          | ı         | 149 - 259  | ,,   | 133 - 244              | 140 - 249                          | 140 - 249                          | 140 - 249                          | 140 - 249                          | 141 - 250                          | 140 - 252                          | 147 - 257  | 134 - 241                  | - 1  | 147 - 257                    | 133 - 242                           | 140 - 250                  | 155 - 244                          | 142 - 25                            | 1  | 141 - 251 |
| 1553 14                                    | 1554 1  |                                    |                                   |                                      | 1559                                 |                                   |                                   |                                     |                                    |                                    |                                    |           |  | -  | 1560 1                 |                                    |                                    |                                    |                                    | •                                  | 1575                               | •  |                            |  |                              | _                                   | 1581 1                     | •                                  |                                     | Π,   | 1586      |
| 1076G12                                    | 1076H02   | 1076H05                            | 1076H06                           | 1076H09                              | 1076H10                              | 10777D06                          | I078B04                           | I078E10                             | I002A01-K                          | I002A01-R                          | I026C04-K                          | I026C04-R | I067B10  |  | IU68CU6                | 1003C06                            | 1025C00                            | 1025B09                            | 1026C04                            | 1027B12                            | I030A10                            | I064C04  | I064C07                    | I065D04  | 1065D08                      | 1065F08                             | 1067F05                    | 1068B04<br>1068B08                 | 1068C08                             | 1068F03  | I069B07   |

| , ,                    | ,       | ELGLSIVGA11GALDM (SEQ ID NO: 21/4)<br>FIGSTSTYGATTGALDM (SEQ ID NO: 2174) |           | , ,     |                    | -              | ·         | (SEQ ID NO: 3014) | _         |          |           |               |           |           |           |           |           |           |           |          | ` '           |           |         | - '       |           | •         |           | /         | ·         | (SOUTH TOTAL TEND (SEQ ID INO. 3049) | - ,       |           |
|------------------------|---------|---|-----------|---------|--------------------|----------------|-----------|-------------------|-----------|----------|-----------|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|---------------|-----------|---------|-----------|-----------|-----------|-----------|-----------|-----------|--------------------------------------|-----------|-----------|
| 1 1                    | 1       | 98 - 113  | 1         | 1       | 1                  | 1              | 99 - 123  | 100               | 100 - 118 | 99 - 115 | 99 - 111  | 99 - 119      | 99 - 113  | 98 - 116  | 102 - 121 | 99 - 119  | 99 - 114  | 99 - 107  | 100 - 119 | 99 - 118 | 99 - 114      | 99 - 120  | 1       |           |           |           | 1         | 99 - 113  | 1         | 98 - 112                             | 100 - 116 | CII - 66  |
| 50 - 66<br>50 - 66     | 1       | 49 - 65   | 50 - 66   | 50 - 66 | 50 - 66            | <b>50 - 66</b> | 20 - 66   | į                 | 79 - 75   | 20 - 66  | 20 - 66   | 20 - 66       | 20 - 66   | 50 - 65   | 52 - 69   | 20 - 66   | 20 - 66   | 20 - 66   | 52 - 67   | 20 - 66  | 20 - 66       | 50 - 66   | 46 - 62 | 50 - 65   | 20 - 66   | 20 - 66   | 50 - 66   | 50 - 66   | 1         | 50-65                                | 52 - 67   | 20 - 00   |
| 1 1                    | · ·     | 26 - 34   | 1 1       | 26 - 35 | 1                  | 26 - 35        | 26 - 35   | ,                 | 76 - 57   | 1        | 1         | t             | 1         | 26 - 35   | 26 - 37   | 26 - 35   | 26 - 35   | 26 - 35   | 26 - 37   | 26 - 35  | 26 - 35       | 1         |         | 26 - 35   | 1         | 1         | 26 - 35   | 26 - 35   | 26 - 35   | 26 - 35                              | 26 - 37   | 26 - 35   |
| 1 - 125<br>1 - 125     | 1 - 120 | 1 - 124   | 1 - 124   | 1 - 124 | 1 - 128            | 1 - 124        | 1 - 134   | ,                 | 1 - 129   | 1 - 124  | 1 - 122   | 1 - 130       | 1 - 124   | 1 - 127   | 1 - 132   | 1 - 130   | 1 - 125   | 1 - 118   | 1 - 130   | 1 - 129  | 1 - 125       | 1 - 131   | 1 - 127 | 1 - 126   | 1 - 124   | 1 - 117   | 1 - 122   | 1 - 124   | 1 - 122   | 1 - 123                              | 1 - 127   | 1 - 126   |
| 1 3                    | 1       |   | 230 - 240 | 1 1     | •                  | 230 - 239      | 236 - 246 |                   | 234 - 244 | 1        | 228 - 237 | 235 - 245     | 230 - 239 | 233 - 242 | 236 - 244 | 236 - 245 | 231 - 240 | 224 - 233 | 235 - 245 | 1        | 227 - 237     | 236 - 246 | - 1     | 232 - 241 | 230 - 239 | 222 - 232 | 224 - 234 | 230 - 239 | 228 - 237 | 228 - 238                            | 1         | 228 - 238 |
| - 198 23<br>- 194 22   |         | 198   | 197       |         | 197                |                | - 203     |                   | - 201     | - 196    | - 195     | - 202         | - 197     | - 200 ;   | - 203     | - 203     | - 198     | - 191     | - 202     | - 202    | - 194         | - 203     | - 199   | - 199     | - 197     | - 189     | - 191     | - 197     | - 195     | - 195                                | - 200     | - 195 2   |
| 176 192<br>172 188     |         |   |           | 174 190 |                    |                | 181 197   |                   | 79 195    | 74 190   | 173 189   | 180 196       | 175 191   | 78 194    | 181 197   | 81 197    | 76 192    | 185       | 180 196   |          | 172 188       |           | 177 193 |           | 175 191   |           | 169 185   |           |           |                                      |           | 173 189   |
| 1 1                    | 1       | 1   | 163 - 1.  | . 1     |                    | 162 - 17       | 1         |                   | 167 - 17  | 162 - 17 | ì         | $\overline{}$ | 162 - 1'  | 165 - 17  | 7         | 1         | 163 - 1   | 1         | 168 - 1   | 1        | $\overline{}$ | •         | 165 - 1 | ì         | 1         | 155 - 1   | 159 - 1   | 162 - 1   |           | 7                                    | 7         | 163 - 1   |
|                        |         |   | 251       |         |                    |                |           |                   | 255       | . 250    | 248       | . 256         | . 250     | . 253     | . 255     | . 256     | . 251     | - 244     | - 256     | . 255    | . 248         | - 257     | - 253   | - 252     | - 250     | - 243     | - 245     | - 250     | - 248     | - 249                                | - 253     | - 249     |
| 141 - 251<br>141 - 248 | 136 -   | 140 -   | 140-      | 140     | 144                | 140 -          | 150-      |                   | 145 - 255 | 140 -    | 138 -     | 146           | 140       | 143       | 148       | 146       | 141       | 134       | 146       | 145      | 141           | 147       | 143     | 142       | 140       | 133       | 138       | 140       | 138       | 139                                  | 143       | 142       |
| 1587                   | 1589    | 1590  | 1591      | 1592    | 1594               | 1595           | 1596      |                   | 1597      | 1598     | 1599      | 1600          | 1601      | 1602      | 1603      | 1604      | 1605      | 1606      | 1607      | 1608     | 1609          | 1610      | 1611    | 1612      | 1613      | 1614      | 1615      | 1616      | 1617      | 1618                                 | 1619      | 1620      |
| I071B03<br>I072B09     | I073F04 | I074B12   | 1075A02   | 10/5501 | 10/8D02<br>1078T01 | 1078H08        | 1064A03   |                   | I064B03   | 1064B05  | I064B11   | I064C02       | T064C03   | 1064C11   | T064C12   | T064D03   | T064D04   | 1064D06   | 1064E05   | 1064E06  | 1064F07       | I064F09   | I064F10 | 1064F11   | 1064G01   | 1064G04   | I064G08   | I064G10   | 1064G11   | 1064G12                              | 1064H03   | 1064H04   |

| DRGASNYDILTGYYAPAQGVAFDI<br>(SEO ID NO: 2969) | •       | AIYDKLIGISKDGFDI(SEQID | 7 /     |         | -       |         | _, _    |         |         |          |         |         |           | •       |           |          |          |          |          | GLYFEDINYRHGDAFDI (SEQ ID NO: 2/90) |         | ' '     |               |           | •         | _ '      | •        | ٠, ١     | ٠.        |         |         |         | O AGSSLMII IGIDV (SEQIDIVO: 2113) |
|---|---------|------------------------|---------|---------|---------|---------|---------|---------|---------|----------|---------|---------|-----------|---------|-----------|----------|----------|----------|----------|-------------------------------------|---------|---------|---------------|-----------|-----------|----------|----------|----------|-----------|---------|---------|---------|-----------------------------------|
| 99 - 122                                      | 1       | 99 - 114               |         | 1       |         | ı       | 1       | 1       |         | ı        |         | 1       |           | 1       | 99 - 116  | 99 - 115 | 99 - 112 | 99 - 110 | 99 - 119 |                                     |         |         | 1             | 98 - 113  | 102 - 118 | 99 - 116 | 99 - 114 | 99 - 114 | 101 - 116 | 1       |         | 1       | 99 - 110                          |
| 99 - 09                                       | 50 - 66 | 50 - 66                | 20 - 00 | 00 - 00 | 20-00   | 20 - 00 | 50 - 66 | 50 - 66 | 20 - 66 | 50 - 66  | 20 - 66 | 20 - 66 | 20 - 66   | 20 - 66 | 20 - 66   | 20 - 66  | 20 - 66  | 50 - 66  | 1        | 1                                   | 50 - 65 | 20 - 66 | 20 - 66       | 20 - 65   | 53 - 69   | 20 - 66  | 20 - 66  | 20 - 66  | 50 - 68   | 1       | 1       | 1       | 20 - 66                           |
| 26 - 35                                       | 26 - 35 | 26 - 35                | 20 - 32 | 20 - 33 | 26 - 33 | 1       | ı       | 26 - 35 | 26 - 35 | 26 - 35  | 26 - 35 | 26 - 35 | 26 - 35   | 26 - 35 | 26 - 35   | 26 - 35  | 26 - 35  | 26 - 35  | 26 - 35  | 26 - 35                             | 26 - 35 | 26 - 35 | 26 - 35       | 26 - 35   | 26 - 38   | 1        | 1        | 1        | 1         | t       | 26 - 35 | 1       | 26 - 35                           |
| 1 - 133                                       | 1 - 125 | 1 - 125                | 1 - 125 | 1 - 128 | 671 - 1 | 1 - 126 | 1 - 130 | 1 - 123 | 1 - 120 | 1 - 125  | 1 - 125 | 1 - 121 | 1 - 126   | 1 - 126 | 1 - 127   | 1 - 126  | 1 - 123  | 1 - 121  | 1 - 130  | 1 - 126                             | 1 - 129 | 1 - 125 | 1 - 124       | 1 - 124   | 1 - 129   | 1 - 127  | 1 - 125  | 1 - 125  | 1 - 127   | 1 - 124 | 1 - 124 | 1 - 122 | 1 - 121                           |
| 235 - 245                                     | ı       | 1                      | 1       | ı       | •       | 1       | 1       | 1       | 1       | - 1      | 1       | 7 - 236 | 2 - 241   | ) - 238 | 3 - 242   | 2 - 241  | 5 - 235  | 3 - 233  |          | 8 - 238                             | 1       | 7 - 237 | 230 - 239     | 1         | 1         | 1        | 7 - 237  | 1        | 1         | 6 - 236 | 1       | ì       | 7 - 236                           |
|   | • • •   | • • •                  |         |         | •       |         |         |         | 192 225 |          |         | 194 227 | 199 232 - |         | 200 233 - | 199 232  | 192 225  |          | 203 236  | 195 228                             |         |         |               |           |           | 196 229  | 194 227  | 198 231  |           | 193 226 |         |         | 194 227                           |
| 196 - 202                                     | 1       | 188 - 194              | t       | ,       | 1       | 1       | •       | - 1     |         | 191 - 19 | 1       | ı       | 1         | 1       | - 1       | - 1      | 1        | 1        | 1        | 1                                   | 2       | ۱<br>8  | $\overline{}$ | 191 - 197 | 192 - 1   | 190 - 1  | 188 - 1  | 1        | 194 - 2   | 1       | 1       | 1       | 188 - 1                           |
|   | 172 1   | 172 1                  | 172 1   | ,,      | 180     |         |         | 174     | 170 1   |          |         | 172     | 177       | 175     | 178       | 177      | 170      |          | 181      | 173                                 |         |         | . 175         | . 175     | . 176     | . 174    | . 172    | . 176    | . 178     | . 171   | - 171   | - 173   | - 172                             |
| 170 - 180                                     | 162 -   | 162                    | 162     | 166 -   | 167 -   | 164 -   | 167 -   | 161 -   | 158 -   | 163 -    | 163 -   | 159 -   | 164       | 165     | 165 -     | 164      | 160      | 158      | 168      | 163                                 | 167     | 162     | 162           | 162       | 166       | 164      | 162      | 163      | 165       | 161     | 161     | 160     | 159                               |
| 149 - 256                                     | - 248   | 1                      | 1       | 1       | 1       | 252     | 5 - 253 | - 249   | 5 - 246 | - 253    | 1       | 7 - 247 | 2 - 252   | 1       | 3 - 253   | 1        | t        | - 1      | - 1      | - 1                                 | 5 - 255 | 1       | 0 - 250       | 0 - 250   | 1         | 3 - 250  | •        | 1 - 251  | 3 - 253   | t       | 0 - 247 | 8 - 248 | 7 - 247                           |
| 149   | 141     | 141                    | 141     | 144     | 145     | 142     | 146     | 139     | 136     |          | 141     | 137     | ι         | , ,     |           |          |          | ' '      |          |                                     | •       |         | 140           | 140       | 145       | 143      | 141      |          | , ,       |         |         | 138     |                                   |
| 1621  | 1622    | 1623                   | 1624    | 1625    | 1626    | 1627    | 1628    | 1629    | 1630    | 1631     | 1632    | 1633    | 1634      | 1635    | 1636      | 1637     | 1638     | 1639     | 1640     | 1641                                | 1642    | 1643    | 1644          | 1645      | 1646      | 1647     | 1648     | 1649     | 1650      | 1651    | 1652    | 1653    | 1654                              |
| 1064H06                                       | I065A02 | I065A04                | I065A06 | I065A07 | I065B01 | 1065B05 | I065B09 | I065B12 | T065C02 | 1065C06  | 1065C08 | T065C10 | 1065D01   | 1065D03 | 1065D05   | 1065006  | 1065E01  | T065F05  | 1065E06  | 1065E08                             | 1065E09 | 1065E12 | 1065F04       | I065F05   | 1065F07   | 1065F09  | 1065F12  | 1065G01  | 1065G09   | 1065G10 | 1065H05 | 1065H07 | I066A05                           |

|  | . –   | 0 QGGQYDSPPFDV (SEQ ID NO: 3001)<br>2 GEKARYYDILTGYYSAWGGYYMDV |          |                      |          | ·       |         |          |          |         |           | _         | GPSSAGTTIGLGSFDP (SEQ ID NO: 3005 |           |          | _         | ·        | ·         |           | ·         | ERGVVTAYGGDSFDL (SEQ ID NO: 2 |          | 7        |           | -        | ,1      | 0 AGSSLMTYGTDV (SEQ ID NO: 2773) |
|--|---|--|----------|----------------------|----------|---------|---------|----------|----------|---------|-----------|-----------|-----------------------------------|-----------|----------|-----------|----------|-----------|-----------|-----------|-------------------------------|----------|----------|-----------|----------|---------|----------------------------------|
| 1 1 1 1 1 1  | 1 1   | 99 - 110<br>99 - 122   | 00 - 114 |                      | 1        | 1       | 1       | 1        |          |         | 1         | 99 - 115  | 99 - 114                          | 99 - 116  | 94 - 106 | 99 - 108  | 99 - 114 | 99 - 110  | 1         | 1         | 1                             | ı        |          | 1         | 1        | 1       | 99 - 110                         |
| 50 - 66<br>50 - 66<br>50 - 66<br>50 - 66<br>50 - 65<br>50 - 65 | 50 - 66<br>50 - 66                                      | 50 - 66<br>50 - 66   | 50 - 66  | 50 - 66              | 50 - 66  | 20 - 66 | 20 - 66 | 20 - 66  | 20 - 66  | 20 - 66 | 20 - 66   | 20 - 66   | 20 - 66                           | 20 - 66   | 45 - 61  | 99 - 09   | 99 - 09  | 20 - 66   | 20 - 66   | 20 - 66   | 20 - 66                       | 99 - 09  | 20 - 66  | 20 - 66   | 99 - 09  | 1       | 20 - 66                          |
|  | 1 1   | 5 - 35   |          | 26 - 35              | 26 - 35  | 26 - 35 | 26 - 35 | 26 - 35  | 26 - 35  | 26 - 35 | 26 - 35   | 26 - 35   | 26 - 35                           | 26 - 35   | 26 - 30  | 26 - 35   |          | 1         | 1         | 1         |                               | - 1      | 1        | 1         | 3        | 1       | 26 - 35                          |
|  | <ul><li>121</li><li>26</li><li>125</li><li>26</li></ul> | 121 26<br>133 26   |          |                      |          |         |         |          |          |         |           |           |                                   |           |          |           |          |           |           |           | 124 2                         |          |          | _         |          |         | 121 2                            |
|  | 1 -1  | 1 1  | ٠ .      | <u> </u>             | -        | 1-      |         | _        | -        | ,<br>,  | <u>_</u>  | 1-        | _                                 | <u>-</u>  | 1        | 1-        | 1        | <u>-</u>  | 1         | 7         | <del>-</del>                  | ,<br>,   | 1.       |           | <u>,</u> | ,<br>—— | 1 -                              |
| 1 1 1 1 1 1  | - 236   | - 236  |          | 1                    | 1        | - 237   | - 240   | - 237    | - 240    | - 242   | 1 - 243   |           | 1                                 | 1         |          | - 1       | 1        | t         | •         | - 1       | )-239                         | 1        | 1        | 1         |          | 1       | 7 - 236                          |
|  | 1 227<br>1 227  | t 227  |          |                      |          |         |         |          |          |         |           |           |                                   | 5 229     | ) 223    | 3 221     |          |           | 4 227     | 3 226     | 7 230                         |          |          | 1 224     |          |         | 4 227                            |
| 6 - 192<br>3 - 199<br>8 - 194<br>3 - 199<br>4 - 200<br>8 - 194 | 88 - 194<br>88 - 194                                    | 88 - 194   |          | 93 - 199<br>93 - 199 |          |         |         | 88 - 194 | 91 - 197 | 1       | 95 - 201  | 93 - 199  | 88 - 194                          | 90 - 196  | 84 - 190 | 82 - 188  | 88 - 194 | 88 - 194  | 88 - 194  | 187 - 193 | 91 - 197                      | 93 - 199 | 88 - 194 | .85 - 191 | 1        | 1       | 88 - 194                         |
|  | — —   | H C  | i ÷      | 7 19                 | 1        | 1       | _       | ~~       |          | 1       | _         |           | 2 18                              |           | 1        |           |          | _         |           | _         | 175 19                        | 7 19     | 2 18     | _         | 2 18     | _       | _                                |
| 0 - 170<br>4 - 177<br>2 - 172<br>4 - 177<br>6 - 178            | 9 - 172<br>2 - 172                                      | 9 - 172  |          | 4 - 17<br>4 - 17     | 1        | 1       | ì       | 2 - 172  | 1        | 1       | 166 - 179 | 164 - 177 | 162 - 17                          | 164 - 174 | 5 - 168  | 156 - 166 |          | 159 - 172 | 162 - 172 | 159 - 171 | 162 - 17                      | 164 - 17 | 159 - 17 | 156 - 169 | 159 - 17 |         | 159 - 172                        |
|  |   | 17 159   |          | 107<br>107<br>108    |          |         |         |          |          |         |           |           |                                   |           |          |           |          |           | , ,       |           | ٠.                            |          |          | 244 15    | _        |         | 247 15                           |
| 9 - 246<br>2 - 252<br>1 - 248<br>2 - 252<br>4 - 254<br>1 - 248 | 1 1   | 1 1  | 1        | 1 1                  | .1 - 248 | 1       | 1       | •        | 1        | t       | 1         | 2 - 252   | 1                                 | 143 - 250 | - 1      | 135 - 242 | 1        | 137 - 24  | 141 - 248 | 137 - 247 | 1                             | - 1      | - 1      | - 1       | 1        | 1       | 137 - 24                         |
|  | 137   |  |          | 141                  |          | 141     | 141     | 141      |          | 143     | 144       |           | 141                               |           |          |           |          |           |           |           |                               |          | , .      |           | . ,      | •       |                                  |
| 1655<br>1656<br>1657<br>1657<br>1659<br>1660                   | 1661<br>1662  | 1663   |          | 1666                 | 1667     | 1668    | 1669    | 1670     | 1671     | 1672    | 1673      | 1674      | 1675                              | 1676      | 1677     | 1678      | 1679     | 1680      | 1681      | 1682      | 1683                          | 1684     | 1685     | 1686      | 1687     | 1688    | 1689                             |
| 1066A06<br>1066A12<br>1066B05<br>1066B11<br>1066C06<br>1066C10 | 1066D02<br>1066D07                                      | 1066E01  |          | 1060E04<br>1066E05   | 1066E07  | I066E09 | I066F01 | 1066F03  | 1066F04  | I066F07 | 1066F08   | I066F11   | 1066F12                           | 90D990I   | 1066G07  | 1066H02   | I067A02  | I067A03   | I067A06   | I067A08   | I067A10                       | I067B03  | I067B04  | I067C03   | 1067C05  | I067C07 | 1067C10                          |

| TYYDILTGYSGGGAFDY (SEQ ID NO: 3024) |                    | AGSSLMTYGTDV (SEQ ID NO: 2773) |          | ·        | _       | _       |         | -       |         | QHYDILTGYSQEPFDI (SEQ ID NO: 3022) | • •       | _         |           | •       | ENYDFLTGYYGAFDI (SEQ ID NO: 27) | ·         | AGSSLMTYGTDV (SEQ ID NO: 2773) | GGLYDILTGRPATDDAFDI (SEQ ID NO: | •          | 0 GREDTDKVKPWDRYYHYYYMDV | (SEQ ID NO: 2809) | _         |           |           |                      | RYGDPFYYYYMNV (SEQ ID NO: 2755) |           | MEYDILTGYYGGYFDY   | MEYDILTGYYGGYFDY |          | PYYDILTGYFAFDI (SEQ ID NO: 3026) | •         |           | •        | 5 DGY YDILLIGYSY YGMDV (SEQ ID NO: 2133) |
|-------------------------------------|--------------------|--------------------------------|----------|----------|---------|---------|---------|---------|---------|------------------------------------|-----------|-----------|-----------|---------|---------------------------------|-----------|--------------------------------|---------------------------------|------------|--------------------------|-------------------|-----------|-----------|-----------|----------------------|---------------------------------|-----------|--|------------------|----------|----------------------------------|-----------|-----------|----------|--|
| 99 - 115                            | 1                  | 1                              | 1        | 1        | 1       | 1       | 1       | 1       | ı       |                                    | ı         | 1         | 1         | 1       | 1                               | 99 - 114  | 99 - 110                       | 99 - 117                        | 99 - 115   | 99 - 120                 |                   | 99 - 106  | 98 - 113  | 99 - 114  |                      | 1                               | 1         | 1  |                  | 1        | 1                                | ì         | 1         | 1        | 99 - 115                                 |
| 20 - 66                             | 50 - 66            | 20 - 66                        | 20 - 66  | 20 - 66  | 20 - 66 | 20 - 66 | 20 - 66 | 20 - 66 | 20 - 66 | 50 - 66                            | 20 - 66   | 20 - 66   | 20 - 66   | 20 - 66 | 50 - 66                         | 50 - 66   | 50 - 66                        | 50 - 66                         | 50 - 66    | 50 - 66                  |                   | 50 - 66   | ı         | 50 - 66   | 20 - 66              | 20 - 66                         | 20 - 66   | <del>20 - 66 50 - 66 50 50 50 50 50 50 50 50 50 50 50 50 50 </del> | 50 - 66          | 1        | ŀ                                | 1         |           | t        | 20 - 66                                  |
| 36-35                               | 1                  | 26 - 35                        | 26 - 35  | 26 - 35  | 26 - 35 | 26 - 35 | 26 - 35 | 26 - 35 | 26 - 35 | 26 - 35                            | 26 - 35   | - 1       |           | ,       | 26 - 35                         | 26 - 35   | 26 - 35                        | 1                               | 26 - 35    | 26 - 35                  |                   | 26 - 35   | 26 - 34   | 26 - 35   | 26 - 35              | 26 - 35                         | 1         | 26 - 35  | 1                | 26 - 35  | 1                                | 1         | 1         | ı        | 26 - 35                                  |
| 1 - 126                             | 1 - 120            | 1 - 121                        | 1 - 130  | 1 - 121  | 1 - 126 | 1 - 121 | 1 - 121 | 1 - 126 | 1 - 128 | 1 - 125                            | 1 - 128   | 1 - 123   | 1 - 124   | 1 - 121 | 1 - 124                         | 1 - 125   | 1 - 121                        | 1 - 128                         | 1 - 126    | 1 - 131                  | 1                 | 1 - 117   | 1 - 124   | 1 - 125   | 1 - 119              | 1 - 123                         | 1 - 130   | 1 - 125  | 1 - 125          | 1 - 125  | 1 - 123                          | 1 - 125   | 1 - 127   | 1 - 127  | 1 - 126                                  |
| 27.3                                |                    | 3 - 233                        |          | 3 - 233  | 2 - 241 | 7-236   | ı       | 1       | 4 - 243 | 9 - 237                            | 4 - 243   | 225 - 235 | 226 - 236 | 7 - 236 | - 1                             | 231 - 240 | 226 - 236                      | 230 - 240                       | 233 - 243  | 238 - 246                | 2                 | 226 - 236 | 231 - 240 | 231 - 241 | 224 - 234            | 229 - 239                       | 237 - 247 | 229 - 237  | 1                | 1        | t                                | 227 - 237 | 229 - 239 | 1        | 228 - 238                                |
| 100 222                             |                    | 190                            |          | 190      |         | 194     | 194     | 198     | 201     | 196                                | 201       | 192       | 193       | 194 227 | 193                             | 198       | 193                            | 197                             | 200        | 205                      | 3                 | - 193 22  |           | 198       |                      | - 196 22                        |           | - 196 22   |                  | 196      | 196                              |           |           |          | - 195 22                                 |
|                                     | 187 -              | 184 -                          | •        | - 1      | 193 -   | 188 -   | 188 -   |         | - 1     | 190                                | 195 -     |           |           |         |                                 | 192       | 187                            | 191                             |            |                          |                   | 185 -     | 192 -     | 192 -     | 185 -                | 190 -                           | 198 -     | 190  | 188              |          |                                  | 188       | 190       | 190      | 189                                      |
| 177                                 | 5 - 171            | 1                              | 3 - 180  | 1        | · i     | 172     | 1       | 1-176   | 1       | - 1                                | 1         | ı         | I - 171   | - 1     | 1                               | 1         | 1                              | 1                               | 5 - 178    | 1                        |                   | 7 - 169   |           | 1         | 9 - 169              | - 1                             | 1         | 1  | ,                | 4 - 174  | i.                               | 1         | - 1       | 4 - 174  | 1  |
| 164                                 |                    | 4 158                          |          |          |         |         |         |         |         |                                    | 4 166     |           |           |         |                                 |           |                                |                                 |            |                          |                   |           | 51 163    |           |                      | 250 162                         |           |  |                  |          |                                  | 248 162   | 250 164   |          | 249 163                                  |
| 040 040                             | ) T                | 137 - 244                      | 3        |          | t       | 3       | 1       | 1       | 1       | 141 - 24                           | 144 - 254 | - 1       | - 1       | - 1     | 1                               | 1         | 1                              |                                 | 1          | 1                        |                   | 133 - 247 | 140 - 251 | 141 - 24  | 135 - 24             | 139 - 2                         | - 1       |  |                  | 141 - 24 | - 1                              | 141 - 24  | - 1       | 143 - 2: | 1  |
| 00,7                                | 1691               | 1692                           | 1693     | 1694     | 1695    | 1696    | 1697    | 1698    | 1699    | 1700                               | 1701      | 1702      | 1703      | 1704    | 1705                            | 1706      | 1707                           | 1708                            | 1700       | 1710                     | 1/10              | 1711      | 1717      | 1713      | 1714                 | 1715                            | 1716      | 1717   | 1718             | 1719     | 1720                             | 1721      | 1722      | 1723     | 1724                                     |
| 0                                   | 106/C12<br>1067D01 | 1067003                        | 10671005 | 50C1/50I | 1067109 | 106717  | 1067E02 | TO67E04 | TO67E05 | 1067F01                            | 1067F03   | 1067F04   | 1067F08   | 1067F10 | T067F11                         | TO67G01   | 105/501                        | 705/00I                         | 1068 A 0.7 | 1008A07                  | TOPOEDO           | 0000701   | 1068E08   | 1000E11   | 10.12501<br>10.68G05 | 1068G06                         | 1068G11   | 1069A09  | T069A10          | 1069B06  | 1069B09                          | 1069B12   | 1069C06   | 1069C09  | I069D03                                  |

| DGYYDILTGYSYYGMDV (SEQ ID NO: 2135)<br>VYYDILTGYNLFFDY (SEQ ID NO: 2177)<br>MEYDILTGYYGGYFDY (SEQ ID NO: 2179)<br>MEYDILTGYYGGYFDY (SEQ ID NO: 2179)<br>GYYDILTGYYDAFDI (SEQ ID NO: 3051)<br>DGYYDILTGYSGYYMDV (SEQ ID NO: 3059) | DRLEYYDLTGYYYYYGMDV (SEQ ID NO: 3039)<br>MEYDLTGYYGGYFDY (SEQ ID NO: 2179) | METDLLIGITGGIFDT (SEQ ID NO: 2179) MEYDLLIGYYGGYFDY (SEQ ID NO: 2179) SOSDYDIT TGYYYYGMDV (SEQ ID NO: 3038) | ID NO: 2179          |                    | SQSDYDIL'I'GYYYYYGMDV (SEQ ID NO: 3028)<br>SOSNYDII TGYYYYYGMDV (SEO ID NO: 3067) | ID NO:                 | GMGDHYGMDV (SEQ ID NO: 2161) | GMGDHYGMDV (SEQ ID NO: 2161) | AGISLMINIGIDY (SEQ 10 NO. 3048) VPVVVDTSGGVI GEVYYGMDV (SEO ID NO. 3010) | AGTSLMNYGTDV (SEQ ID NO: 3048) | ATYDPLTGYSFDGFDI (SEQ ID NO: 2153) | SRDLLLFPHYGMDV (SEQ ID NO: 2133) | ATYDPLTGYSFDGFDI (SEQ ID NO: 2153) | GMGDH YGMDV (SEQ ID INO: 2101)<br>AGSST MTVGTDV (SEO ID NO: 2773) | ATYDPLTGYSFDGFDI (SEQ ID NO: 2153) | ENYDYL TGYYGAFDI (SEQ ID NO: 2995) | GMGDHYGMDV (SEQ ID NO: 2161) | ATYDPLTGYSFDGFDI (SEQ ID NO: 2153) | ATYDPLTGYSFDGFDI (SEQ ID NO: 2155) | GMIGDH I GMIDY (SEQ ID INO; 2101) | Alidreigisfugeni (SEQ ID IOC 2133)<br>Egevini travvvgvgrmin (SEO ID NO: 2171) |                        |          |
|--|--|---|----------------------|--------------------|---|------------------------|------------------------------|------------------------------|--|--------------------------------|------------------------------------|----------------------------------|------------------------------------|---|------------------------------------|------------------------------------|------------------------------|------------------------------------|------------------------------------|-----------------------------------|---|------------------------|----------|
|  | <u> </u>   | 99 - 114<br>99 - 114<br>00  | 99 - 114             |                    | 99 - 117  |                        | 99 - 108                     |                              | 99 - 110   |                                | 1                                  | 99 - 112                         | 99 - 114                           | 99 - 108  | 99 - 114                           |                                    | 99 - 108                     | 99 - 114                           | 99 - 114                           |                                   | 99 - 114  | ,                      |          |
| 50 - 66<br>50 - 66<br>50 - 66<br>50 - 66<br>50 - 66<br>50 - 66   | 50 - 66<br>50 - 66   | 50 - 66<br>50 - 66  | 50 - 66              | 50 - 66<br>50 - 66 | 50 - 66   | 50 - 66                | 50 - 66                      | 50 - 66                      | 50 - 66  | 97 - 09<br>50 - 66             | 50 - 66                            | 99 - 09                          | 50 - 66                            | 50 - 66   | 50 - 66                            | 50 - 66                            | 50 - 66                      | 20 - 66                            | 50 - 66                            | 50 - 66                           | 20 - 00   | 50 - 66                |          |
| 1 1 1 1 1  | 26 - 35  | 26 - 35<br>26 - 35  | $\sigma \sim \sigma$ | 26 - 35<br>26 - 35 | 26 - 35   | 26 - 35                |                              | 26 - 35                      | 26 - 35  | 26 - 35                        | 26 - 35                            | 26 - 35                          |                                    | 26 - 35   | 26 - 35                            | 26 - 35                            | 26 - 35                      | 26 - 35                            | 1                                  | 1                                 | 26 - 35   | 1 1                    |          |
| - 126<br>  - 124<br>  - 125<br>  - 125<br>  - 125<br>  - 124   | 1 - 129<br>1 - 125   | 1 - 125<br>1 - 125  | 1 - 128              | 1 - 125<br>1 - 125 | 1 - 128   | 1 - 126<br>1 - 125     | 1 - 119                      | 1 - 119                      | 1 - 121  | 1 - 150<br>1 - 121             | $\frac{1}{1} - \frac{125}{125}$    | 1 - 123                          | 1 - 125                            | 1 - 119   | 1 - 121                            | 1 - 124                            | 1 - 119                      | 1 - 125                            | 1 - 125                            | 1 - 119                           | 1 - 125   | 1 - 128<br>1 - 125     |          |
| 5 - 238<br>5 - 236<br>7 - 237<br>7 - 237<br>5 - 236<br>8 - 238   | 1 1  | 1 1   | 1 1                  | 9 - 237<br>1 - 240 | 1   | 7 - 237                | 1                            | 1                            | 1  | 6 - 245<br>7 - 236             | 1 1                                | 1                                | 1                                  | 1 .   | 1 - 230                            | 1                                  | 1                            | 1                                  | 1                                  | 1                                 | 1   | 4 - 243<br>1 - 240     | ı        |
| 195 228 -<br>193 226 -<br>194 227 -<br>194 227 -<br>193 226 -<br>195 228 -   |  |   |                      | 196 229<br>198 231 |   | - 197 250<br>- 194 227 |                              |                              |  | - 203 236                      |                                    |                                  | ` '                                |   | 194 227                            |                                    |                              |                                    |                                    |                                   |   | 201 234<br>198 231     |          |
| 189 - 1<br>187 - 1<br>188 - 1<br>188 - 1<br>187 - 1  | 1 1  | 190 - 1<br>188 - 1  | 1 1                  | 1 1                | ν, -  | 191 - 1                | 7                            | 9                            | 188 - 1  | _ 0                            | 2 0                                | -0                               | 1                                  |   | 102                                | 1                                  | 1                            | 1                                  | 1                                  | 1                                 | 2 '   | 192 - 192 -            |          |
| - 173<br>- 171<br>- 172<br>- 172<br>- 173  | - 176  | - 174   | - 179<br>- 176       | - 174<br>- 176     | - 179   | - 172                  |                              | - 170                        | Π,   | - 181                          | - 176                              | - 174                            |                                    | - 170   | 2/1 -                              | 1                                  | · `                          | 1                                  | 'n                                 | ì                                 | - 176   | - 176<br>- 176         |          |
| 163<br>161<br>162<br>162<br>162<br>161<br>161  |  |   |                      | 25<br>163          |   | 5 5 5                  |                              |                              |  | 168                            |                                    |                                  |                                    |   | 159                                | ``_                                |                              |                                    | ٠.                                 |                                   | <u> </u>  | 4 166<br>1 163         |          |
| 2 - 249<br>0 - 247<br>1 - 248<br>1 - 248<br>0 - 247<br>2 - 249   | 1 1  | 1 1   | ) I                  | 1 - 248<br>1 - 251 | 1   | 4 - 251<br>1 - 248     | 1                            | 1                            | 7 - 247  | 146 - 256                      | 157 - 247<br>141 - 251             | - 1                              | 141 - 251                          | 1   | [37 - 247<br>[41 - 251             | 1 1                                |                              | - 1                                | 1                                  | 1                                 | 141 - 251   | [44 - 254<br>[41 - 25] |          |
| 142<br>140<br>141<br>141<br>140  |  |   |                      | 141<br>141         |   | 144<br>14 1            |                              |                              |  |                                | -, .                               | . —                              | _                                  | -   | (-                                 |                                    | , ,                          |                                    |                                    | ι                                 |   |                        |          |
| 1725<br>1726<br>1727<br>1728<br>1729   | 1731<br>1732   | 1733<br>1734  | 1735<br>1736         | 1737               | 1739  | 1740                   | 1742                         | 1743                         | 1744   | 1745                           | 1740                               | 1748                             | 1749                               | 1750  | 1751                               | 1753                               | 1754                         | 1755                               | 1756                               | 1757                              | 1758  | 1759                   | <u> </u> |
| 1069E09<br>1069E11<br>1069F05<br>1069F07<br>1069F12  | 1069G08<br>1069G11   | I070A03<br>I070A09  | I070B01<br>I070B05   | 1070D03<br>1070D04 | I070E01   | I070F01                | IO/10110<br>IO/1A06          | I071B02                      | I071D02  | I071D08                        | 1071F01<br>1071G09                 | 1072.A01                         | I072A09                            | I072B02   | I072B10                            | 10/2B11<br>1072B12                 | 1072/01                      | 1072C10                            | I072D01                            | I072D05                           | I072E01   | 1072E04                | 1014100  |

|  |  | 110 AGTSLMNYGMDV (SEQ ID NO: 3070)<br>114 GPYDILTGYYRDAFDI (SEQ ID NO: 2998)<br>115 THYDILTGYYTADAFDI (SEQ ID NO: 3019)<br>121 VQMDSEYYDLLTGINVGPYYFDY<br>(SEO ID NO: 2132) | 114 ATYDPLTGYSFDGFDI (SEQ ID NO: 2153)<br>114 ATYDPLTGYSFDGFDI (SEQ ID NO: 2153)<br>114 ATYDPLTGYSFDGFDI (SEQ ID NO: 2153) | GDFGDYDILTGYYPVYYGMDV (SEQ ID<br>SYYDILTGYYPFGMDV (SEQ ID NO: 300k<br>DLWYYDILTGYYLDDAFDI (SEQ ID NO: |   | <ul> <li>114 GYHDTLTSYNYNWFDP (SEQ ID NO: 3006)</li> <li>121 AQMDSEYYDLLTGINVGPYYFDY</li> <li>(SEQ ID NO: 3076)</li> <li>114 ATYDPLTGYSFDGFDI (SEQ ID NO: 2153)</li> <li>117 GMGDHYMDV (SEQ ID NO: 2000)</li> </ul> |   |
|--|--|---|--|---|---|---|---|
|  | 3 1 1                                    | 99 - 1<br>99 - 1<br>99 - 1  | 99 - 1<br>99 - 1<br>99 - 1   | 1 1 1   | 1 1 1 1 1   | 99 - 114<br>99 - 121<br>99 - 114  | 99 - 115<br>99 - 114<br>101 - 119<br>99 - 114<br>99 - 108   |
| 50 - 66<br>50 - 66<br>50 - 66<br>50 - 66<br>50 - 66<br>50 - 66             | 50 - 66<br>50 - 66<br>50 - 66            | 50 - 66<br>50 - 66<br>50 - 66<br>50 - 66  | 50 - 66<br>50 - 66<br>50 - 66  | 50 - 66<br>50 - 66<br>50 - 66   | 50 - 66<br>50 - 66<br>50 - 66<br>50 - 66<br>50 - 66           | 50 - 66<br>50 - 66<br>50 - 66   | 50 - 66<br>50 - 66<br>50 - 68<br>50 - 68<br>50 - 66<br>50 - 66  |
| 26 - 35<br>26 - 35<br>26 - 35<br>26 - 35<br>26 - 35<br>26 - 35             | 1 1 1                                    | 26 - 35<br>26 - 35<br>26 - 35<br>26 - 35  | 26 - 35<br>26 - 35<br>26 - 35  | 26 - 35<br>26 - 35<br>26 - 35   | 26 - 35<br>26 - 35<br>26 - 35<br>26 - 35<br>26 - 35           | 26 - 35<br>26 - 35<br>26 - 35   | 26 - 35<br>26 - 35<br>26 - 35<br>26 - 35<br>26 - 35<br>26 - 35<br>26 - 35   |
| 1 - 119<br>1 - 119<br>1 - 125<br>1 - 124<br>1 - 125<br>1 - 125             | 1 - 121<br>1 - 125<br>1 - 125<br>1 - 125 | - 121<br>  - 125<br>  - 126<br>  - 132  | - 125<br>  - 125<br>  - 125  |   |   | -125<br>  -132<br>  -125  |   |
| 221 - 231<br>221 - 231<br>231 - 240<br>226 - 236<br>227 - 237<br>226 - 236 | 1 1 1                                    | 227 - 236<br>229 - 237<br>232 - 241<br>238 - 247  | 231 - 240   231 - 240   231 - 240   1  | 1 1 1   | 1 1 1 1   | 227 - 237   234 - 244   1   232 - 241   1   220 - 241   1   | 232 - 241 1 227 - 237 1 236 - 245 1 231 - 240 1 231 - 240 1 224 - 224 - 234 1 224 - 234 1 224 - 234 1 1 234 1 1 2 2 2 4 - 234 1 1 2 2 2 2 4 - 234 1 2 2 2 2 4 - 234 1 2 2 2 2 2 4 - 234 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 |
| - 188<br>- 198<br>- 193<br>- 194<br>- 194                                  | 193                                      | - 194<br>- 196<br>- 199<br>- 205  | - 198<br>- 198<br>- 198  | - 199<br>- 196<br>- 201   | . 192<br>. 195<br>. 198<br>. 198                              | - 194<br>- 201<br>- 199   | - 194<br>- 194<br>- 203<br>- 198<br>- 198   |
| 56 182<br>56 182<br>76 192<br>71 187<br>72 188<br>71 187                   |  |   |  |   | . 193   |   | 7 193<br>2 188<br>1 197<br>6 192<br>6 192<br>6 192<br>9 185   |
| 156 - 166<br>156 - 166<br>163 - 176<br>161 - 171<br>162 - 172<br>159 - 171 | 159 - 17<br>163 - 17<br>163 - 17         | 1 1 1   | 63 - 17<br>63 - 17<br>63 - 17  | 67 - 17<br>64 - 17<br>66 - 17   | 160 - 179<br>160 - 170<br>160 - 173<br>163 - 176<br>163 - 176 | 62 - 172<br>69 - 179<br>64 - 177<br>55 - 165  | 164 - 177<br>162 - 172<br>168 - 181<br>163 - 176<br>163 - 176<br>157 - 169  |
| 242<br>242<br>251<br>247<br>247<br>248                                     | 247<br>251<br>251                        | 247<br>248<br>252<br>252<br>258   |  | 253 1<br>248 1<br>254 1   |   |   | - 252 1<br>- 248 1<br>- 256 1<br>- 251 1<br>- 251 1   |
| 135 -<br>135 -<br>141 -<br>140 -<br>141 -                                  | 137 -<br>141 -<br>141 -                  | 137 -<br>141 -<br>142 -<br>148 -  | 141 -<br>141 -<br>141 -  | 146 -<br>141 -<br>144 -   | 1 1 1 1 1   | 141 -<br>148 -<br>141 -   | 142 -<br>141 -<br>146 -<br>141 -<br>141 -<br>141 -  |
| 1761<br>1762<br>1763<br>1764<br>1765<br>1766                               | 1767<br>1768<br>1769                     | 1771<br>1771<br>1772<br>1772  | 1774<br>1775<br>1776   | 1777<br>1778<br>1779  | 1780<br>1781<br>1782<br>1783                                  | 1785<br>1786<br>1787<br>1787  | 1789<br>1790<br>1791<br>1792<br>1793  |
| 1072E06<br>1072F03<br>1072F07<br>1072F11<br>1072G03                        | 1072G05<br>1072G09<br>1072H03            | 1072H07<br>1073A02<br>1073A03<br>1073A04  | I073A05<br>I073A06<br>I073A09  | 1073A10<br>1073A11<br>1073B02   | 10/3B03<br>10/3B06<br>10/3B07<br>10/3B11                      | 1073C01<br>1073C02<br>1073C04<br>1073C07  | 1073C08<br>1073C09<br>1073C11<br>1073C12<br>1073D01   |

| RYGDPFYYYYYMNV (SEQ ID NO: 2755) ELGLSIVGATTGALDM (SEQ ID NO: 2174) GGYDIL TQYPAEFFHP (SEQ ID NO: 2764) DQGRYLDL (SEQ ID NO: 2175) DRYYDILTKGDYYYGMDV (SEQ ID NO: 3060) VQGETYYDILTGYWGPKRDLYGMDV | (SEQ ID NO: 3009) ELGLSIVVATTGALDM (SEQ ID NO: 2980) ESEGGDYTNPFGY (SEQ ID NO: 2991) DQGRYLDL (SEQ ID NO: 2175) ELGLSIVGATTGALDM (SEQ ID NO: 2174) | DECREAM CALLEY (SEQ ID NO: 2174) DPGNYDILTGYYYYYGMDV (SEQ ID NO: 2935) VRLPHHHYFMAV (SEQ ID NO: 3075) ESSITVNPPYYFYGMDV (SEQ ID NO: 3025) | DQGRYLDL (SEQ ID NO: 2175)<br>DQGRYLDL (SEQ ID NO: 2175)<br>SPEGDYQPLSSNYNWLDP (SEQ ID NO: 3011) | GKEGYNDN (SEQ ID NO: 3089)<br>GSGYDLLTGYFTGSPLDY (SEQ ID NO: 2766)<br>SPEGDYOPLSSNYNWLDP (SEO ID NO: 3011) | MGHYDILTGYRHYGMDV (SEQ ID NO: 2831)<br>GNYDILTGYPHDL (SEQ ID NO: 3086)<br>SYYDILTGYYHTPLDY (SEO ID NO: 2853) | GSGYDLLTGYFTGSPLDY (SEQ ID NO: 2766)<br>DDRDILTNYYLEYFQH (SEQ ID NO: 2868)<br>GSGYDVLTGYFTGSPLDY (SEO ID NO: 3057) | GRYDILTGYFTSFDY (SEQ ID NO: 3066)<br>DDRDILTNYYLEYFQH (SEQ ID NO: 2868)<br>STGYDII TGYYMGSAFDO (SEO ID NO: 2800) | MGHYDILTGYRHYGMDV (SEQ ID NO: 2831)<br>DOGRYLDL (SEQ ID NO: 2175) | ELGLSIVGAŤTGALDM (SEQ ÍD NO: 2174)<br>GTGYDILTGYYMGSAFDQ (SEQ ID NO: 2800) | DQGRYLDL (SEQ ID NO: 2175)<br>RDVQGAPY (SEQ ID NO: 3088)<br>VEGVYDIL,TGYSFDAFDI (SEQ ID NO: 3078) |
|---|--|---|--|--|--|--|--|---|--|---|
| 99 - 112   98 - 113   99 - 114   69 - 116   99 - 116   99 - 116   99 - 123  | 113<br>1111<br>106   | 1119<br>1110<br>1110<br>1115  | 99 - 106 1<br>99 - 106 1<br>99 - 116 5   | 116  | 115  | 116 1114 1   | 113  | 115 1   | -113   | 99 - 106 I<br>99 - 106 I<br>99 - 116  |
| 35 50 - 66<br>34 49 - 65<br>35 50 - 66<br>35 50 - 66<br>35 50 - 66<br>35 50 - 66<br>35 50 - 66  | 34 49 - 65<br>35 50 - 66<br>35 50 - 66   | 50 50   | 35 50 - 66<br>35 50 - 66<br>35 50 - 66   |  |  | 35<br>35   | 35   | 35 50<br>35 50  | 34 49 - 65<br>35 50 - 66   | 35 50 - 66<br>36 51 - 66<br>35 50 - 66  |
| 26 - 26 - 26 - 26 - 26 - 26 - 26 - 26 -   | 26 - 26 - 26 - 26 - 26 - 26 - 26 - 26 -  | 1 1 1 1   | 117 26 -<br>117 26 -<br>127 26 -   | 26-  |  |  | 26 -   | 26 -  | 26 -<br>26 -   | 26 -<br>26 -<br>26 -  |
|   | · · · ·  |   | 1 1 1  |  | 1 1 1  |  |  | 1 - 1   | <b>→ →</b>   |   |
| 230 - 240<br>230 - 240<br>230 - 240<br>224 - 235<br>232 - 242<br>241 - 251  | 230 - 240<br>229 - 238<br>224 - 234  | 1 1 1 1   | 223 - 231<br>224 - 233<br>233 - 243  | 1 1 1  | 1 1 1  | 232 - 242<br>232 - 243<br>233 - 245  | 1 1  |   | 1 1  | 222 - 232<br>224 - 234<br>233 - 243   |
| 191 - 197<br>191 - 197<br>191 - 197<br>185 - 191<br>193 - 199<br>202 - 208  | 191 - 197<br>190 - 196<br>185 - 191  | 1 1 1 1   | 184 - 190<br>185 - 191<br>194 - 200  | 185 - 191<br>193 - 199<br>195 - 201  | 193 - 199<br>190 - 196<br>192 - 198  | 1 1 1  | 190 - 196<br>193 - 199   |   | 192 - 198<br>195 - 201   | 183 - 189<br>185 - 191<br>194 - 200   |
| - 175<br>- 175<br>- 175<br>- 169<br>- 177   | - 175<br>- 174<br>- 169  | - 170<br>- 170<br>- 178   | - 168<br>- 169<br>- 178  | - 169  | - 177 - 174 - 176 - 176  | 177<br>177<br>178  | 174  | 177<br>177<br>168   | 176<br>179   | - 167<br>- 169<br>- 178   |
| 251 162<br>251 163<br>251 165<br>246 156<br>253 167<br>262 173  | 251 163<br>249 161<br>245 156  |   | 242 158<br>244 157<br>254 166  | 246 156<br>253 167<br>255 166  |  |  |  |   | 252 163 -<br>255 166 -   | 243 157 -<br>245 156 -<br>254 166 -   |
| 139 - 2<br>140 - 2<br>141 - 2<br>133 - 2<br>143 - 2<br>150 - 2  | 140 - 2<br>138 - 2<br>133 - 2  | 1 1 1 1   | 133 - 2<br>133 - 2<br>143 - 2  | 1 1 1  | 142 - 2<br>138 - 2<br>141 - 2  | 143 - 2<br>141 - 2<br>143 - 2  | 140 - 2  | 1 1   | 140 - 2:<br>143 - 2:   | 133 - 2<br>133 - 2<br>143 - 2   |
| 1831<br>1832<br>1833<br>1834<br>1835<br>1835  | 1837<br>1838<br>1839   | 1841<br>1842<br>1843  | 1844<br>1845<br>1846   | 1847<br>1848<br>1849   | 1850<br>1851<br>1852   | 1853<br>1854<br>1855   | 1856<br>1857<br>1858   | 1859<br>1860  | 1861<br>1862   | 1863<br>1864<br>1865  |
| 1074B11<br>1074C07<br>1074D03<br>1074D04<br>1074D05<br>1074D07  | 1074D08<br>1074D11<br>1074E05  | 10/4E0/<br>1074E09<br>1074E11<br>1074H05  | I075A03<br>I075A10<br>I075B07  | 1075D11<br>1075D12<br>1075G02  | 1075G09<br>1075G10<br>1075H05  | I075H07<br>I076A11<br>I076A12  | 1076B06<br>1076B10<br>1076B12  | 1076C06<br>1076C11  | I076D06<br>I076E05   | 1076E08<br>1076F06<br>1076G01   |

| EQGYDILTGYYPEGGWFDP (SEQ ID NO: 2834) | ELGLSIVGATTGALDM (SEQ ID NO: 2174)  DESEXYDH TGXYXYXGMDV (SEO ID NO: 3052) |                            | MEYDIL TGYYGGYFDY (SEQ ID NO: 2179) |           | MEYDILTGYYGGYFDY (SEQ ID NO: 2179) | А         | EMGYDILTGYYLNYMDV (SE | EMGYDILTGYYLNYMDV (SE | MEYDILTGYYGGYFDY (SEQ | MEYDILTGYYGGYFDY (SEQ | MEYDILTGYYGGYFDY (SEQ ID | MEYDILTGYYGGYFDY (SEQ ID NO: | _       | • •      | ٠.        | _         | _                 | _         | _        |          | _         | _        |           | ,        |           |           | VGIKAAAVDNFEY (SEQ ID NO: 2197) |           | _         |           | _         |           | _, ,    | WISSGAFDI (SEQ ID NO: 2203) |
|---------------------------------------|--|----------------------------|-------------------------------------|-----------|------------------------------------|-----------|-----------------------|-----------------------|-----------------------|-----------------------|--------------------------|------------------------------|---------|----------|-----------|-----------|-------------------|-----------|----------|----------|-----------|----------|-----------|----------|-----------|-----------|---------------------------------|-----------|-----------|-----------|-----------|-----------|---------|-----------------------------|
| 99 - 117                              | 98 - 113   | 102 - 120<br>99 - 114      |                                     | 99 - 114  | 99 - 114                           | 99 - 113  | 1                     | 99 - 115              | ` i                   | 1                     |                          | ŀ                            |         | 99 - 110 | 99 - 105  | 99 - 109  | 99 - 104          | 99 - 109  | 99 - 103 | 99 - 107 | 99 - 104  |          |           | 99 - 111 | 1         | 99 - 115  | 1                               | 1         | 1         |           | 1         | 99 - 110  | ı       | 99 - 107                    |
| 50 - 66                               |  | 20 - 66<br>50 - 66         | - 1                                 | 50 - 66   | 20 - 66                            | 50-       | - 05                  | 50-                   | 50-                   | 50 -                  | - 05                     | - 05                         | 50 -    | 20 -     | 50 -      | - 05      | <del>-</del> 20 - | 50-       | 50-      | 50-      | 50-       | 50 -     | 50-       | 50       | - 05      | 50-       | 50 -                            | 50-       | 50 -      | 20        | 20        | 20        | 50.     | 20 - 66                     |
| 26 - 35                               | 1  | 76 - 35                    | 1                                   | 26 - 35   | 26 - 35                            | 26 - 35   | 26 - 35               | 26 - 35               | 26 - 35               | 26 - 35               | 26 - 35                  | 26 - 35                      | 26 - 35 | 26 - 35  | 26 - 35   | 26 - 35   | 26 - 35           | 26 - 35   | 26 - 35  | 26 - 35  | 26 - 35   | 26 - 35  | 26 - 35   | 26 - 35  | 1         | 1         | 1                               | - 1       | 1         | 1         | 1         | 1         | 1       | 26 - 35                     |
| - 128                                 |  | 131                        | 1- 125                              | l - 125   | l - 125                            | ı - 124   | l - 126               | 1 - 126               | l - 125               | l - 125               | 1 - 125                  | 1 - 125                      | 1 - 127 | 1 - 121  | 1 - 116   | 1 - 120   | 1 - 115           | 1 - 120   | 1 - 114  | 1 - 118  | 1 - 115   | 1 - 118  | 1 - 122   | 1 - 122  | 1 - 119   | 1 - 126   | 1 - 122                         | 1 - 125   | 1 - 120   | 1 - 120   | 1 - 115   | 1 - 121   | 1 - 122 | 1 - 118                     |
| 3 - 243 1                             | 1  | 7 - 246   1<br>1 - 240   1 | 1                                   | 7 - 237 1 | - 1                                | 6 - 236 1 | 2 - 241 1             | 2 - 241               | 9 - 237               | 7 - 237               | 1 - 240                  | 9 - 237                      | 3 - 242 | 5 - 233  | 220 - 228 | 224 - 232 | 222 - 231         | 227 - 236 | - 1      | 1        | t         | 1        | 1         | 1        |           | 1         | 228 - 238                       | 232 - 242 | 227 - 234 | - 1       | 220 - 229 | 226 - 236 | 1       | 222 - 230                   |
| 200 233                               | 196  | 204 237                    |                                     |           |                                    | 193 226   | 199 232               | 199                   | 196                   | 194 227               | 198 231                  | 196                          | 200 233 | 192 225  | 187       | - 191 22  | - 189 22          | 194 22    | - 187 22 | - 189 22 | - 188 22  | - 189 22 | - 194 22  |          | 193       | 200       | - 195 22                        | - 199 23  | - 194 22  | 194       | 187       |           |         | - 189 2                     |
| 194 -                                 | 190 -  | 198-                       | 192 -                               | 188 -     | 192 -                              | 187 -     | 193 -                 | 193 -                 | 190 -                 | 188 -                 | 192 -                    | 190 -                        | 194 -   | 186 -    | 181 -     | 185       | 183               | 188       | 181      | 183      | 182       | 183      | 188       | 189      | 187 -     | 194 -     | 189                             | 193       | 188       | 188       | 181 -     | 187       | 187     | 183                         |
| 8 - 178                               | 4 - 174  | 9 - 182                    | 3 - 176<br>3 - 176                  | 2 - 172   | 3 - 176                            | 1 - 171   | 4 - 177               | 4 - 177               | 4 - 174               | 2 - 172               | 3 - 176                  | i,                           | 5 - 178 | 0 - 170  | 1         | 159 - 169 | 4 - 167           | 9 - 172   | 2 - 165  | 7 - 167  | 153 - 166 | ì        | 160 - 172 | 1 - 173  | 158 - 171 | 166 - 178 | 1 - 173                         | 164 - 177 | 161 - 172 | 159 - 172 | 153 - 165 | 159 - 171 | 1       | 7 - 167                     |
| 24 168                                |  | 57 169                     |                                     |           |                                    |           |                       |                       |                       |                       | 251 163                  |                              | 253 165 | 244 160  | 239 155   | 243 15    | 242 154           | 247 159   | 240 152  | 241 157  | 241 15    | 241 157  | 248 16    | 249 161  |           | 254 16    | 249 161                         | 53 16     | 245 16    | 249 15    | 240 15    | 247 15    |         | 241 157                     |
| 144 - 254                             | 1  | 147 - 257                  | 1 1                                 | . 1       | - 1                                | 1         | ı                     | - 1                   | 1                     | 141 - 24              | 141 - 2                  | 141 - 24                     | 143 - 2 | 137 - 24 | 132 - 2   | - 1       | 1                 | 136 - 2   | 130 - 2  | 134 - 2  | 131 - 2   | 1        | 138 - 2   | - 1      | 135 - 2   | 142 - 2   | 138 - 2                         | 141 - 2   | 1         | 1         | 1         | 137 - 2   | 138 - 2 | 1                           |
| 1866                                  | 1867   | 1868                       | 1809                                | 1871      | 1872                               | 1873      | 1874                  | 1875                  | 1876                  | 1877                  | 1878                     | 1879                         | 1880    | 1881     | 1882      | 1883      | 1884              | 1885      | 1886     | 1887     | 1888      | 1889     | 1890      | 1891     | 1892      | 1893      | 1894                            | 1895      | 1896      | 1897      | 1898      | 1899      | 1900    | 1901                        |
| 1076H01                               | 1076H03  | I077B05                    | 1077C10<br>1077D01                  | 1077704   | 1077701                            | 1077D12   | 1077E01               | 1077E03               | 1077E08               | I077F05               | 905/L0I                  | I077H02                      | I078B05 | 1079E02  | 1079F11   | 1082G02   | 1082H08           | I099D03   | I079B05  | I079B12  | I079C01   | 1079F06  | I079F08   | I080A03  | I080A08   | I080B01   | I080D03                         | I080E05   | 1080G07   | 1080G09   | I082A05   | I082B08   | I082C03 | I082D07                     |

| 148 - 253 169 - 179 195 - 201 234 - 242 1 - 132 26 - 35 50 - 68 101 - 121 LPPDLRYCDGGMCSGFDWLGP (SEQ ID NO: 3219) 140 - 247 161 - 171 187 - 193 226 - 236 1 - 124 26 - 35 50 - 66 99 - 113 ESLLTEEYCGSDCYS (SEQ ID NO: 3115) 136 - 243 157 - 167 183 - 189 222 - 232 1 - 120 26 - 35 50 - 66 99 - 109 RYYDY (SEQ ID NO: 3139) 130 - 237 151 - 161 177 - 183 216 - 226 1 - 114 26 - 35 50 - 66 99 - 109 RYYDY (SEQ ID NO: 3139) 136 - 243 157 - 167 183 - 189 222 - 232 1 - 120 26 - 35 50 - 66 99 - 109 NITPLAMVGDF (SEQ ID NO: 3146) | - 243 159 - 169 185 - 191 224 - 232 1 - 120 26 - 35 50 - 66 99 - 109 1 - 243 157 - 167 183 - 189 222 - 232 1 - 120 26 - 35 50 - 66 99 - 109 1 | -243 159 - 169 185 - 191 224 - 232 1 - 120 26 - 35 50 - 66 99 - 109 1<br>-245 157 - 170 186 - 192 225 - 234 1 - 119 26 - 35 50 - 66 99 - 108 ( | -243 15/-16/ 183-189 222-232 1-120 26-35 50-66 99-<br>-241 157-167 183-189 222-230 1-118 26-35 50-66 99- | 131 - 242 154 - 166 182 - 188 221 - 231 1 - 115 26 - 35 50 - 66 99 - 104 GGWLDD (SEQ ID NO: 3210)<br>133 - 245 156 - 169 185 - 191 224 - 234 1 - 117 26 - 35 50 - 66 99 - 106 EHSSSFDY (SEO ID NO: 3111) | -253 164-177 193-199 232-242 1-125 26-35 50-66 99-114 | - 230 100 - 170 192 - 198 251 - 259 1 - 125 20 - 55 30 - 60 99 - 7<br>- 247 158 - 171 187 - 193 226 - 236 1 - 119 26 - 35 50 - 66 99 - 7 | -252 164-176 192-198 231-241 1-125 26-35 50-66 99-114 ] | -248 162-172 188-194 227-237 1-122 26-35 50-66 99-111 ] | - 195 228 - 238 1 - 122<br>- 195 228 - 238 1 - 121 | -254 165-177 193-199 232-243 1-126 26-37 52-69 102-115 | -243 157 - 167 183 - 189 222 - 232 1 - 117 26 - 35 50 - 66 99 - 106 | 136 - 248 159 - 172 188 - 194 227 - 237 1 - 120 26 - 37 52 - 67 100 - 109 KQRREKYFDY (SEQ ID NO: 3100)<br>142 - 254 165 - 178 194 - 200 233 - 243 1 - 126 26 - 35 50 - 66 99 - 115 FKATIETTSGFADPFDI (SEO ID NO: 3151) | - 249 161 - 173 189 - 195 228 - 238 1 - 122 26 - 37 52 - 67 100 - 111 RPALRSLWYFDL (SEQ ID NO: 3102) | -248 160-172 188-194 227-237 1-121 26-35 50-68 101-110 1 | -253 164-179 195-201 234-242 1-123 26-35 50-66 99-112 | - 1/2 188 - 194 22/ - 23/ 1 - 122 26 - 33 20 - 60 99 - 111 3 | - 254 108 - 178 154 - 200 253 - 245 1 - 128 26 - 50 51<br>- 256 167 - 180 196 - 202 235 - 245 1 - 128 26 - 35 50 | 160-173 189-195 228-238 1-121 26-35 50-66 99-110 | $-243\ 154 - 167\ 183 - 189\ 222 - 232\ 1 - 115\ 26 - 35\ 50 - 66\ 99 -$ | -249 160-173 189-195 228-238 1-121 26-35 50-66 99-110 ] | -173 189 - 195 228 - 238 1 - 122 26 - 35 50 - 66 99 - 111 | -245 161-171 187-193 226-234 1-120 26-35 50-66 99- | 141 - 254 164 - 177 193 - 199 232 - 243 1 - 125 26 - 35 50 - 66 99 - 114 ETFSHCSGGSCYPFDY (SEQ ID NO: 3212) |
|---|---|--|--|--|---|--|---|---|--|--|---|--|--|--|---|--|--|--|--|---|---|--|---|
| 148 - 255<br>140 - 247<br>136 - 243<br>130 - 237<br>136 - 243   | 1 1   | 1 1  | 1 1  | t t  | 1   | 1 1  | 1   | 1   | 1 1  | 1  | t   | 1 1  | 1  | - 1  | 1   | 1  | 1 1  | - 1  | 1  | - 1   |   | 1  | •   |
| 1938<br>1939<br>1940<br>1941<br>1942  | 1943  | 1945<br>1946   | 1947<br>1948   | 1949<br>1950   | 1951  | 1932<br>1953   | 1954  | 1955  | 1950<br>1957                                       | 1958   | 1959  | 1960<br>1961   | 1962   | 1963   | 1964  | 1965   | 1967   | 1968   | 1969   | 1970  | 1971  | 1972   | 1973  |
| 1079F02<br>1079F03<br>1079F04<br>1079F09<br>1079F10   | I079F12<br>I079G02  | 1079G05<br>1079G06   | 0.79H0701  | I080A01<br>I080A02   | 1080A05   | 1080A00<br>1080A07   | I080A10   | 1080B02   | 1080B05  | I080B06  | I080B07   | 1080B09  | I080B10  | I080B11  | I080B12   | 1080C03  | 1080C07  | I080C08  | I080C10  | I080C11   | 1080C12   | I080D01  | I080ID02  |

|   |                      |                                 |           |           |  | ,         |                              |           |           |           |           |           |           |           |           |           | <u></u>   |           |                            |           |           |           |           |           |           |           |                                   |                         |           |           |           |           |         |                            |
|---|----------------------|---------------------------------|-----------|-----------|--|-----------|------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------------------------------|-------------------------|-----------|-----------|-----------|-----------|---------|----------------------------|
| SGRQAYYYYGMDV (SEQ ID NO: 3091)<br>FFEGYVYY TDV (SEQ ID NO: 3165) | , ,,                 | VDYTDYEMGAFEI (SEQ ID NO: 3187) | •         | •,        |  |           | LHCSGGSCGF (SEQ ID NO: 3221) |           |           |           |           | •         |           |           |           | _         |           | _         | LRPDADYGDYGFDY (SEQ ID NO: | -         |           | _         |           |           |           |           | RTPDHINGDSGPPDY (SEQ ID NO: 3215) | DTTDY (SEQ ID NO: 2203) | _         | _         | _         | _         | _       | GGDRAFDI (SEQ ID NO: 3119) |
| 99 - 111  | 101 - 110            | 99 - 111                        | 99 - 108  | 101 - 108 | 99 - 109   | 100 - 109 | 101 - 110                    | 99 - 115  | 99 - 110  | 99 - 103  | 99 - 111  | 99 - 115  | 99 - 111  | 99 - 103  | 99 - 113  | 99 - 104  | 99 - 116  | 100 - 109 | 100 - 113                  | 99 - 112  | 99 - 108  | 99 - 110  | 100 - 109 | 99 - 110  | 101 - 110 | 99 - 111  | 99 - 112                          | 99 - 103                | 1         | 99 - 103  | 1         |           | 1       | 99 - 106                   |
| 50 - 66   | 50 - 68              | 50 - 66                         | 50 - 66   | 50 - 68   | <del>20 - 66 50 - 66 50 50 50 50 50 50 50 50 50 50 50 50 50 </del> | 52 - 67   | 50 - 68                      | 20 - 66   | 50 - 66   | 20 - 66   | 20 - 66   | 20 - 66   | 20 - 66   | 20 - 66   | 51 - 66   | 50 - 66   | 20 - 66   | 52 - 67   | 52 - 67                    | 20 - 66   | 50 - 66   | 20 - 66   | 52 - 67   | 20 - 66   | 20 - 68   | 50 - 66   | 51 - 66                           | 50 - 66                 | 20 - 66   | 20 - 66   | 20 - 66   |           | 1       | 20 - 66                    |
| 26 - 35   | 26 - 35              | 26 - 35                         | 26 - 35   | 26 - 35   | 26 - 35  | 26 - 37   | 26 - 35                      | 26 - 35   | 26 - 35   | 26 - 35   | 26 - 35   | 26 - 35   | 26 - 35   | 26 - 35   | 26 - 36   | 26 - 35   | 26 - 35   | 26 - 37   | 26 - 37                    | 26 - 35   | 26 - 35   | 26 - 35   | 26 - 37   | - 1       | - 1       | 26 - 35   | 26 - 36                           | 26 - 35                 | 26 - 35   | 26 - 35   | 1         | 26 - 35   | 1       | 26 - 35                    |
| 1 - 122   | 1 - 121              | 1 - 122                         | 1 - 119   | 1 - 119   | 1 - 120  | 1 - 120   | 1 - 121                      | 1 - 126   | 1 - 121   | 1 - 114   | 1 - 122   | 1 - 126   | 1 - 122   | 1 - 114   | 1 - 124   | 1 - 115   | 1 - 127   | 1 - 120   | 1 - 124                    | 1 - 123   | 1 - 119   | 1 - 121   | 1 - 120   | 1 - 121   | 1 - 121   | 1 - 122   | 1 - 123                           | 1 - 114                 | 1 - 119   | 1 - 114   | 1 - 114   | 1 - 114   | 1 - 118 | 1 - 117                    |
| 227 - 237   | 1 1                  | - 1                             | 1         | - 1       | 225 - 235  | 226 - 236 | 227 - 237                    | 233 - 243 | 228 - 238 | 221 - 231 | 228 - 238 | 232 - 242 | 27 - 237  | 1         | 229 - 239 | 1         | 232 - 241 | 226 - 236 | 231 - 241                  | 227 - 237 | 225 - 235 | 228 - 238 | 226 - 236 | 228 - 238 | 227 - 237 |           | 228 - 238                         | 218 - 226               | 225 - 234 | - 1       | 216 - 226 | 1         | 1       | 223 - 232                  |
| 194   | 194                  |                                 |           | - 191 2   |  | - 193 2   | - 194 2                      | 200       | 195       | 188       | 195       | 199       | 194       |           | 196       |           | 66]       | [93       | 86                         | 4         | 92        | 195       | 193       |           | - 194 2   | - 197 2   | 195                               | 185                     | 192       | 185       | - 183 2   | 981       |         | - 190 2                    |
| 188   | 188                  |                                 | 187       | 185       | 186  | 187       | 188                          | 194 -     | 189-      | 5 182 -   | 189 -     | 7 193 -   | 188 -     |           | 190-      | 187       |           | _         |                            | 2 188 - 1 |           |           | - 181 -   |           | 188       | 191       | 3 189 -                           | 3 179 -                 | 186-      | 3 179 -   | 177       | 1 180 - 1 | 181     | 184                        |
| 162 - 172   | 172 - 172            | 61 - 174                        | 158 - 171 | 159 - 169 | 160 - 170  | 159 - 171 | 160 - 172                    | 165 - 178 | 160 - 173 | 154 - 166 | 161 - 173 | 165 - 177 | 162 - 172 | 154 - 164 | - 1       | 156 - 171 | 167 - 177 | 159 - 171 | 164 - 176                  | 162 - 172 | 158 - 170 |           | 159 - 171 | 160 - 173 | 160 - 172 | 162 - 175 | 163 - 173                         | 53 - 163                | 157 - 170 | 153 - 163 | 1         | 152 - 164 | 55 - 16 | 155 - 168                  |
|   | 248 16               | 250 10                          |           |           | 246 10   | 247 15    | 248 16                       | 254 16    | 249 10    | 242 15    | 249 10    | 253 10    |           |           | 250 10    |           | ٠.        | ` '       | 252 10                     |           |           |           | 247 13    |           | 248 10    | 251 10    | 249 10                            | 237 13                  |           | 237 13    | 237 13    | 240 12    | 241 13  | -                          |
| 1   | 137 - 2              | 1                               | 1         | 1         | - 1  | - 1       | 1                            | 142 - 2   | 137 - 2   | 130 - 2   | 138 - 2   | 142 - 2   | 138 - 2   | - 1       | ı         | 131 - 2   | 143 - 2   | 1         | 140 - 2                    | 139 - 2   | - 1       | 1         | 1         | - 1       | - 1       | 138 - 2   | 139 - 3                           | 1                       | 135 - 2   | 1         | 130 - 3   | - 1       | 134 - 2 | - 1                        |
| 1974  | 1976                 | 1977                            | 1978      | 1979      | 1980   | 1981      | 1982                         | 1983      | 1984      | 1985      | 1986      | 1987      | 1988      | 1989      | 1990      | 1991      | 1992      | 1993      | 1994                       | 1995      | 1996      | 1997      | 1998      | 1999      | 2000      | 2001      | 2002                              | 2003                    | 2004      | 2005      | 2006      | 2007      | 2008    | 2009                       |
| I080D04   | 10801D03<br>10801D08 | 1080D09                         | I080D11   | I080D12   | I080E01  | I080E04   | I080E06                      | I080E07   | I080E08   | I080E12   | I080F04   | I080F05   | 1080F06   | I080F08   | I080G03   | I080G04   | 1080G10   | I080G11   | 1080H01                    | I080H02   | I080H03   | 1080H04   | 1080H05   | 90H080I   | 1080H07   | 1080H08   | 1080H09                           | I081A01                 | I081A03   | I081A04   | I081A06   | I081A08   | I081A09 | I081A10                    |

|  |                            |                            |                               |                          |                         |                         |                        |                         |                         |                              |                          |                          |                         |               |              |                         |                         |                        |                         |                            |                             | 3184)                               |                        |                           |                         |                             |                           |           |           |                     |             |             |            |                  |
|--|----------------------------|----------------------------|-------------------------------|--------------------------|-------------------------|-------------------------|------------------------|-------------------------|-------------------------|------------------------------|--------------------------|--------------------------|-------------------------|---------------|--------------|-------------------------|-------------------------|------------------------|-------------------------|----------------------------|-----------------------------|-------------------------------------|------------------------|---------------------------|-------------------------|-----------------------------|---------------------------|-----------|-----------|---------------------|-------------|-------------|------------|------------------|
| 3)<br>O: 2211)   | 3119)                      | : 3179)                    | ELTGANDAFDI (SEQ ID NO: 3104) | 2920)                    | 3)                      | 3)                      | 3169)                  | 3)                      | 3)                      | 0: 3103)                     | 3147)                    | 3147)                    | 3)                      | $\overline{}$ | : 3200)      | 3)                      | 3)                      | 3)                     | 3)                      | (O: 3137)                  | D: 3118)                    | GLAPIVDGGMTNDAFDI (SEQ ID NO: 3184) | 3)                     | 170)                      | 3)                      | ): 3156)                    | 2920)                     | 3)        | 3)        |                     | 0: 3097)    | 3)          | <u>. 3</u> | 3)               |
| NO: 220<br>EO ID N                                     | ΣĎ NO:                     | QIDNO                      | (SEQ ID                       | ID NO:                   | NO: 220                 | NO: 220                 | D NO:                  | NO: 220                 | NO: 220                 | EQ ID N                      | D NO:                    | D NO:                    | NO: 220                 | NO: 220       | SEQ ID NO: 3 | NO: 220                 | NO: 220                 | NO: 220                | NO: 220                 | SEQID                      | EODE                        | NDAFD                               | NO: 220                | D NO: 3                   | NO: 220                 | EQ ID NC                    | D NO                      | NO: 220   | NO: 2203  | NO: 2203            | (SEQ ID NO: | ID NO: 2203 | NO: 2203   | (SEQ ID NO: 2203 |
| DTTDY (SEQ ID NO: 2203)<br>GNAWGAFDI (SEQ ID NO: 2211) | GGDRAFDI (SÈQ ID NO: 3119) | VKRYYFDY (SEQ ID NO: 3179) | <b>IDAFDI</b>                 | RRYALDY (SEQ ID NO: 2920 | DITIDY (SEQ ID NO: 2203 | OTTDY (SEQ ID NO: 2203) | GFALYKD (SEQ ID NO: 31 | DTTDY (SEQ ID NO: 2203) | OTTDY (SEQ ID NO: 2203) | EDLTGDAFDI (SEQ ID NO: 3103) | 3DAYFDY (SEQ ID NO: 3147 | GDAYFDY (SEQ ID NO: 3147 | DITIDY (SEQ ID NO: 2203 |               |              | DTTDY (SEQ ID NO: 2203) | DTTDY (SEQ ID NO: 2203) | DTTDY (SEQ ID NO: 2203 | OTTDY (SEQ ID NO: 2203) | VGYGGKGDY (SEQ ID NO: 3137 | GAGSRYFDL (SEQ ID NO: 3118) | DGGMI                               | OTTDY (SEQ ID NO: 2203 | RLIRKAR (SEQ ID NO: 3170) | DTTDY (SEQ ID NO: 2203) | ERGNQAFDI (SEQ ID NO: 3156) | RRYALDY (SEQ ID NO: 2920) |           | (SEQ      |                     |             | (SEQ        | _          |                  |
| DTTDY  | GGDRA                      | VKRYY                      | ELTGA                         | RRYAL)                   | DTTDY                   | DITDY                   | GFALYI                 | DTTDY                   | DTTDY                   | EDLTG                        | GDAYE                    | GDAYE                    | DITDY                   | DTTDY         | EGLLDAFDI    | DTTDY                   | DTTDY                   | DTTDY                  | DITIDY                  | VGYGG                      | GAGSR                       | GLAPIV                              | DTTDY                  | RLIRK                     | DITDY                   | ERGNO                       | RRYAL                     | DTTDY     | DITDY     | DTTDY               | SRSPYDAFDI  | DITDY       | DITDY      | DTTDY            |
| 99 - 103   | 99 - 106                   | 901 - 66                   | 99 - 109                      | 1                        | 1                       | 99 - 103                |                        | 99 - 103                | 1                       | 1                            | 1                        | 1                        | 1                       | 99 - 103      | 99 - 107     | 99 - 103                |                         | 99 - 103               | 99 - 103                | 99 - 107                   | 99 - 107                    | 1                                   | 'n                     | 1                         | 1                       | 1                           | 99 - 105                  | 1         | ı         | 1                   | 1           | 1           | 1          | 99 - 103         |
| 50 - 66  |                            | 20 - 66                    | 20 - 66                       | 99 - 09                  | 99 - 09                 | 20 - 66                 | 20 - 66                | 20 - 66                 | 99 - 09                 | 20 - 66                      | 20 - 66                  | 20 - 66                  | 20 - 66                 | 20 - 66       | 20 - 66      | 20 - 66                 | 99 - 09                 | <del>20 - 66</del>     | 20 - 66                 | 20 - 66                    | 20 - 66                     | 20 - 66                             | 99 - 09                | 99 - 09                   | 20 - 66                 | 20 - 66                     | 20 - 66                   | 99 - 09   | 99 - 09   | <del>2</del> 0 - 66 | 20 - 66     |             | 20 - 66    | 20 - 66          |
| 26 - 35 5  |                            |                            | 26 - 35 5                     | 26-35 5                  | 26 - 35 5               | 26-35 5                 |                        |                         |                         | - 35                         | •                        | - 32                     | - 35                    |               |              | 26-35 5                 |                         |                        | 26-35 5                 | 35                         | 26-35 \$                    |                                     |                        |                           |                         | 35                          |                           |           | - 35      | 35                  | - 35        | - 35        | - 35       | 26 - 35          |
| 1-114 2  |                            | • •                        | •                             | 1-116                    | l - 114 2               | 1-114                   | 1-116                  |                         |                         |                              |                          |                          |                         |               | 1 - 118      | 1 - 114                 | 1 - 114                 | 1-114                  | 1 - 114                 | 1 - 118                    | 1 - 118                     | 1 - 126                             |                        |                           |                         |                             | 1 - 116                   | 1 - 114   |           |                     |             |             |            | 1 - 114          |
| 6 - 225 1  | 1                          | - 1                        | 2 - 232                       | 8 - 228                  | 9 - 229                 | 8 - 226                 | 8 - 228                | 8 - 226                 | 8 - 226                 | 1 - 231                      | 8 - 228                  | 1                        | 1                       | 9 - 229       | 4 - 233      | 8 - 226                 | 8 - 226                 | 9 - 229                | 219 - 229               | 220 - 230                  | 220 - 230                   | 228 - 238                           | 219 - 228              | 218 - 228                 | 216 - 226               | 4 - 233                     | 218 - 228                 | 216 - 226 | - 1       | 1                   | 1           | 1           | 1          | 9 - 229          |
| 183 216  | -                          | 186 219                    | • •                           | 185 218                  | 186 219                 | 185 218                 | 185 218                | 185 218                 | 185 218                 | 188 221                      | 185 218                  | 185 218                  | 184 217                 | 186 219       | 191 224      | 185 218                 | 185 218                 | 186 219                | 186 21                  | 187 22                     | 187 22                      | 195 22                              | 186 21                 | 185 21                    | 183 21                  | 191 224                     | 185 21                    | 183 21    | 185 218   |                     | •           |             |            | 186 219          |
| 177 -  | 1                          | 180 -                      | 183 -                         | 179 -                    | 180 -                   | 179 -                   | 179 -                  | 179 -                   | 179 -                   | 182 -                        | 179 -                    | 179 -                    | 178 -                   | 180 -         | 185 -        | 179 -                   | 179 -                   | 180 -                  | 180 -                   | 181 -                      | 181 -                       | 189 -                               | 180 -                  | 179 -                     | 177 -                   | 185 -                       | 179 -                     | 177 -     | 179 -     | 180 -               | 186 -       | 179 -       | 180 -      | 180 -            |
| 51 - 161   | 3                          | 1                          |                               | 53 - 163                 | 52 - 164                | 53 - 163                | 53 - 163               | 53 - 163                | 153 - 163               | 56 - 166                     | 53 - 163                 | 53 - 163                 | 52 - 162                | 52 - 164      | 56 - 169     | 53 - 163                | 53 - 163                | 52 - 164               | 52 - 164                | 55 - 165                   | 55 - 165                    | 63 - 173                            | 52 - 164               | 53 - 163                  | 51 - 161                | 56 - 169                    | 53 - 163                  | 151 - 161 | 153 - 163 | $\overline{}$       | 57 - 170    | 153 - 163   |            | 52 - 164         |
| 236 15   | ' '                        | _                          |                               | 239 1                    | 240 13                  |                         | 239 13                 | 237 1:                  | 237 13                  |                              | 239                      | 239                      | 238                     | 240           | 244          | 237                     | 237                     | 240                    | 240                     |                            |                             | _                                   | 239 1.                 | 239 1                     | 237 1                   | 244                         | 239 1                     | 237 1     | -         | _                   | 245 1       | ·           | -          | 240 1            |
| 1 1  | 133 -                      |                            | 136 -                         | 132 -                    | ı                       | - 1                     | - 1                    | 1                       | - 1                     | 1                            | 132 -                    | 1                        | 130 -                   | 130 -         | 134 -        | 130 -                   | 130 -                   | 130 -                  | 130 -                   | 134 -                      | 134 -                       | 142 -                               | 130 -                  | 132 -                     | 130 -                   | 134 -                       | 132 -                     | 130 -     | 130 -     | 130 -               | 135 -       | 130 -       | 130 -      | 130 -            |
| 2010   | 2012                       | 2013                       | 2014                          | 2015                     | 2016                    | 2017                    | 2018                   | 2019                    | 2020                    | 2021                         | 2022                     | 2023                     | 2024                    | 2025          | 2026         | 2027                    | 2028                    | 2029                   | 2030                    | 2031                       | 2032                        | 2033                                | 2034                   | 2035                      | 2036                    | 2037                        | 2038                      | 2039      | 2040      | 2041                | 2042        | 2043        | 2044       | 2045             |
| 1081B01  | 1081B05                    | T081B06                    | 1081B07                       | I081B08                  | I081B09                 | I081B10                 | I081B11                | I081C07                 | I081C08                 | I081D04                      | I081D06                  | I081D08                  | 81D09                   | I081D10       | I081D11      | I081D12                 | I081E02                 | I081E03                | I081E05                 | 1081E06                    | I081E07                     | I081E10                             | I081F01                | I081F04                   | I081F05                 | I081F06                     | 81F07                     | I081F11   | I081G01   | 81G04               | 81G06       | 1081G10     | I081H02    | I081H03          |
| 2 2  | ĝ                          | Ê                          | 2                             | 8                        | Ĭ                       | Ä                       | 2                      | 2                       | 2                       | Ö                            | Ω̈́                      | 20                       | 2                       | 2             | 2            | 2                       | 2                       | 2                      | 2                       | 01                         | 01                          | 2                                   | 10                     | 10                        | 10                      | 2                           | 2                         | 2         | 2         | 10                  | 2           | 2           | 2          | 10               |

| SNWGGDAFDI (SEQ ID NO: 3202)<br>LAFDI (SEQ ID NO: 3174) | DTTDY (SEQ ID NO: 2203) | PAASSRGPKDAFDI (SEQ ID NO: 3129) | LSGDS (SEQ ID NO: 3122) | EGVAAGEDY (SEQ ID NO: 3123) | FVLDY (SEQ ID NO: 2210) | GNGKDV (SEQ ID NO: 3135) | EGVAAGEDY (SEQ ID NO: 3123)  | DLDFDY (SEQ ID NO: 2208) | VNDIVVVDMDV (SEQ ID NO: 3143) | EKRGSRRVFDI (SEQ ID NO: 3093) | LSNRNDNLRLDY (SEQ ID NO: 3106) | FVLDY (SEQ ID NO: 2210) | TWATNTFDM (SEQ ID NO: 3152)  | FDLDY (SEQ ID NO: 3167) | VEWEDIVVGSAFDI (SEQ ID NO: 3128) | GGDMTTVTTDY (SEQ ID NO: 3177) | ADYSNDYYMDV (SEQ ID NO: 3166)                                      | EGVAAGEDY (SEQ ID NO: 3123) | GPIYYFDGSAYEGYYFDY (SEQ ID NO: 3222) | MNADAFEI (SEQ ID NO: 3223) | PAASSRGPKDAFDI (SEQ ID NO: 3129) | DSRPTNRAFHY (SEQ ID NO: 3110) | LHCTGGSCGF (SEQ ID NO: 3186) | VRDDSAGFDY (SEQ ID NO: 3173) | VLVRGQYRGMDL (SEQ ID NO: 3138) | VDYTDYEMGAFDL (SEQ ID NO: 3172) | DRIAAAGGDAFDI (SEQ ID NO: 3194) | DLYKNGYALFDS (SEQ ID NO: 3197) | DEYSSLYMDV (SEQ ID NO: 3201) | FGAGRLYDDY (SEQ ID NO: 3224) | DNGGGTIGFDY (SEQ ID NO: 2195) | DQGIETANDY (SEQ ID NO: 3207) | DILPDYDFWNPNEDASSLDT (SEQ ID NO: 3133) |
|---|-------------------------|----------------------------------|-------------------------|-----------------------------|-------------------------|--------------------------|--|--------------------------|-------------------------------|-------------------------------|--------------------------------|-------------------------|--|-------------------------|----------------------------------|-------------------------------|--|-----------------------------|--------------------------------------|----------------------------|----------------------------------|-------------------------------|------------------------------|------------------------------|--------------------------------|---------------------------------|---------------------------------|--------------------------------|------------------------------|------------------------------|-------------------------------|------------------------------|--|
| 99 - 108<br>99 - 103                                    | 99 - 103                | 99 - 112                         | 99 - 103                | 99 - 107                    | 99 - 103                | 99 - 104                 | 99 - 107   | 99 - 104                 | 1                             | 99 - 109                      | 99 - 110                       | 99 - 103                | 99 - 107   | 99 - 103                | 99 - 112                         | 99 - 109                      | 99 - 109   | 99 - 107                    | 99 - 116                             | 98 - 105                   | 99 - 112                         | 99 - 109                      | 101 - 110                    |                              | ,                              | 7                               | 99 - 111                        | 1                              |                              |                              | 1                             | 1                            | 99 - 118                               |
| 50 - 66<br>50 - 66                                      | 50 - 66                 | 20 - 66                          | 20 - 66                 | 20 - 66                     | 20 - 66                 | 20 - 66                  | <del>20 - 66 50 - 66 50 50 50 50 50 50 50 50 50 50 50 50 50 </del> | 20 - 66                  | 20 - 66                       | 20 - 66                       | 20 - 66                        | 20 - 66                 | <del>20 - 66 50 - 66 50 50 50 50 50 50 50 50 50 50 50 50 50 </del> | 20 - 66                 | 50 - 66                          | 50 - 66                       | <del>20 - 66 50 - 66 50 50 50 50 50 50 50 50 50 50 50 50 50 </del> | 50 - 66                     | <b>20 - 66</b>                       | 50 - 65                    | 50 - 66                          | 20 - 66                       | <b>20 - 68</b>               | 20 - 66                      | 20 - 66                        | 20 - 66                         | <b>50 - 66</b>                  | 20 - 66                        | <del>20 - 66</del>           | 20 - 66                      | 20 - 66                       | 1                            | 20 - 66                                |
| 26 - 35<br>26 - 35                                      |                         | 26 - 35                          | 26 - 35                 | 26 - 35                     | 26 - 35                 | 26 - 35                  | 26 - 35  | 26 - 35                  | 26 - 35                       | 26 - 35                       | 26 - 35                        | 26 - 35                 | 26 - 35  | 26 - 35                 | 26 - 35                          | 26 - 35                       | 26 - 35  | 26 - 35                     | 26 - 35                              | 26 - 35                    | 26 - 35                          | 26 - 35                       | 26 - 35                      | -1                           | 26 - 35                        | 26 - 35                         | 26 - 35                         | 26 - 35                        | 26 - 35                      | 26 - 35                      | 26 - 35                       | 26 - 35                      | 26 - 35                                |
| 1 - 119<br>1 - 114                                      | 1 - 114                 | 1 - 123                          | 1 - 114                 | 1 - 118                     | 1 - 114                 | 1 - 115                  | 1 - 118  | 1 - 115                  | 1 - 120                       | 1 - 120                       | 1 - 121                        | 1 - 114                 | 1 - 118  | 1 - 114                 | 1 - 123                          | 1 - 120                       | 1 - 120  | 1 - 118                     | 1 - 127                              | 1 - 116                    | 1 - 123                          | 1 - 120                       | 1 - 121                      | 1 - 119                      | 1 - 121                        | 1 - 122                         | 1 - 122                         | 1 - 121                        | 1 - 119                      | 1 - 119                      | 1 - 120                       | 1 - 119                      | 1 - 129                                |
| 1 - 231   |                         | 8 - 238                          | 0 - 229                 | 3 - 232                     | 0 - 229                 | 9 - 227                  | 2 - 230  | 1 - 230                  | 1                             | 2 - 232                       | - 1                            | 220 - 229               | 1  | 0 - 229                 | 1                                | 1                             | - 1  | 1                           | - 1                                  | - 1                        | 5 - 235                          | 4 - 233                       | 1                            | 6 - 237                      | 6 - 236                        | 9 - 239                         | 9 - 239                         | 7 - 235                        | 1                            | ı                            | 1                             |                              | 6 - 245                                |
| 188 221<br>187 220                                      | ٠.                      | 195 228                          | .87 220                 | 190 223                     | 87 220                  | 86 219                   | 89 222   | 88 221                   | 89 222                        | 189 222                       | 190 223                        | 187 22                  | 187 220  | 187 220                 | 194 227                          | 91 224                        | 91 224   | 95 228                      | 196 229                              | 185 218                    | 192 225                          | 191 224                       | 194 227                      | 193 226                      | 193 226                        | 196 229                         | 196 229                         | 194 227                        | 193 226                      |                              | 194 227                       | 193 226                      | 203 236                                |
| 182 - 1   | •                       | 189-1                            | 181 - 1                 | 184 - 1                     | 181 - 1                 | 180 - 1                  | 183 - 1  | 182 - 1                  | 183 - 1                       | 183 - 1                       | 184 - 1                        | 181 - 1                 | 181 - 1  | 181 - 1                 | 188 - 1                          | 85 - 1                        | 85 - 1   | 89 - 1                      | 90 - 1                               | 79 - آ                     | 186 - 1                          | 185 - 1                       | 188 - 1                      | 187 - 1                      | 187 - 1                        | 190 - 1                         | 190 - 1                         | 188 - 1                        | 187 - 1                      | 187 - 1                      | 188 - 1                       | 187 - 1                      | 197 - 2                                |
| 166   | 164                     | . 173                            | - 165                   | - 168                       | - 165                   | - 164                    | - 167  | - 166                    | - 167                         | - 167                         | - 168                          | - 165                   | 155 - 165  | 152 - 165               | 162 - 172                        | 159 - 169                     | - 169  | 0 - 173 1                   | - 174                                | - 163                      | - 170                            | - 169                         | - 172                        | - 171                        | 161 - 171                      | - 174                           | - 174                           | - 172                          | - 171                        | - 171                        | - 172                         | - 171                        | - 181                                  |
| 156 -<br>152 -  | 152.                    | _                                | 152                     |                             | 152                     | 154                      | 157  | 153                      | 157                           | 157                           | 158                            | 152                     | _  |                         | ٠.                               | 15                            | 15   | 16                          | 16                                   | 15.                        |                                  | 159                           |                              | 158                          |                                | 161                             | 161                             | 162                            | 158                          | 158                          | 159 -                         | 158                          | 168                                    |
| 5 - 242   | - 1                     | 1                                | 0 - 240                 | 4 - 243                     | 1                       | 1 - 238                  | 1  | t                        | 136 - 243                     | 5 - 243                       | 7 - 244                        | 130 - 240               | 134 - 241  | 0 - 240                 | 9 - 246                          | 6 - 243                       | 6 - 243  | 134 - 249                   | 143 - 250                            | 132 - 238                  | 139 - 246                        | 6 - 244                       | 137 - 248                    | 135 - 248                    | 7 - 247                        | 8 - 250                         | 8 - 250                         | 7 - 246                        | 5 - 247                      | 1                            | 6 - 249                       | 35 - 246                     | 5 - 256                                |
| 135   | 130                     |                                  |                         |                             |                         | ,,                       | _  | 131                      |                               |                               | ·•                             |                         | -  | , .                     | , ,                              |                               |  |                             |                                      |                            |                                  |                               |                              |                              |                                | 138                             | _                               | _                              | 135                          | 135                          | 136                           |                              | 145                                    |
| 2046  | 2048                    | 2049                             | 2050                    | 2051                        | 2052                    | 2053                     | 2054   | 2055                     | 2056                          | 2057                          | 2058                           | 2059                    | 2060   | 2061                    | 2062                             | 2063                          | 2064   | 2065                        | 2066                                 | 2067                       | 2068                             | 2069                          | 2070                         | 2071                         | 2072                           | 2073                            | 2074                            | 2075                           | 2076                         | 2077                         | 2078                          | 2075                         | 2080                                   |
| 1081H04<br>1081H06                                      | 1081H08                 | I082A02                          | I082A04                 | I082A08                     | I082A11                 | I082B06                  | I082B09  | I082B12                  | 1082C01                       | I082C05                       | I082C08                        | I082D02                 | I082E05  | 1082E06                 | I082E07                          | I082F11                       | I082G07  | I082G10                     | I082G11                              | I082H04                    | 1082H09                          | I083A06                       | I083A09                      | I083A11                      | I083B03                        | I083B05                         | 1083B06                         | I083B10                        | I083C01                      | I083C02                      | I083C07                       | I083C12                      | I083D04                                |

| DFQMVRGVFIANPPIYNYYGMDV<br>(SEQ ID NO: 3154) | DADEGLVEAETTNWFDS (SEQ ID NO: 3126)<br>ATKSYDILTRMYYYHMDV (SEQ ID NO: 2748) | DRTRMDV (SEQ ID NO: 3182) | VGIKAAAVLIVEEI (SEQ ID INO: 2197)<br>DEIYNDAEDY (SEO ID NO: 3105) | DGDISDSPINNQNYAMDI (SEQ ID NO: 3101) | RGGTSENYSGMDV (SEQ ID NO: 3209) | DYPHNAFDI (SEQ ID NO: 3127) | DVRSDRFWSGGYFHYSGMDV (SEQ ID NO: 3131) | STLEVGATDFDY (SEQ ID NO: 3199) | SDDWGAYHI (SEQ ID NO: 3198) | ERGGRDGDYALDF (SEQ ID NO: 3148) | ELVGAPGGFDP (SEQ ID NO: 3191) | •         |           | ERGGRDGDYALDF (SEQ ID NO: 3148) | EGGGDAYDVAPYYFDY (SEQ ID NO: 2204) | DPFDY (SEQ ID NO: 3134) | ALLGLPSDFSYYVDV (SEQ ID NO: 3159) | EGEGDGYNVAPYYFDY (SEQ ID NO: 3160) | TDYGGFDY (SEQ ID NO: 3092) | GGVGDSRGVFDP (SEQ ID NO: 3162) | DTTDY (SEQ ID NO: 2203) | DTTDY (SEQ ID NO: 2203) | ESLTGDAFDI (SEQ ID NO: 3116) | SPLHFSDAFDI (SEQ ID NO: 3120) | DTTDY (SEQ ID NO: 2203) | EVGGAFDI (SEQ ID NO: 3157) |           |           |         | DTTDY (SEQ ID NO: 2203) | DTTDY (SEQ ID NO: 2203) |
|--|---|---------------------------|---|--------------------------------------|---------------------------------|-----------------------------|--|--------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------|-----------|---------------------------------|------------------------------------|-------------------------|-----------------------------------|------------------------------------|----------------------------|--------------------------------|-------------------------|-------------------------|------------------------------|-------------------------------|-------------------------|----------------------------|-----------|-----------|---------|-------------------------|-------------------------|
| 99 - 121                                     | 99 - 115<br>102 - 119   | 99 - 105                  | 99 - 111  | 99 - 116                             | 99 - 111                        | 99 - 107                    | 99 - 118                               | 99 - 110                       | 99 - 107                    | 99 - 111                        | 99 - 109                      | 99 - 111  | 101 - 110 | 99 - 111                        | 99 - 114                           | 99 - 103                | 99 - 113                          |                                    | 99 - 106                   | 99 - 110                       |                         |                         | 99 - 108                     | 99 - 109                      | 99 - 103                | 99 - 106                   | ı         | 1         | ì       | 1                       | 99 - 103                |
| 99 - 09                                      |   |                           | 50 - 66<br>50 - 66  | 99-                                  | 99 - 09                         |                             |  |                                |                             |                                 |                               |           |           | 20 - 66                         | 20 - 66                            | 20 - 66                 |                                   |                                    |                            | 99 - 09                        | 20 - 66                 | 50 - 66                 | 20 - 66                      | 20 - 66                       | 20 - 66                 | 20 - 66                    | 20 - 66   | 20 - 66   | 99 - 09 | 1                       | 20 - 66                 |
| 26 - 35                                      |   |                           | 26 - 35   | 26 - 35                              |                                 |                             | 35                                     | 1                              | 26 - 35                     |                                 |                               |           |           |                                 |                                    |                         | 26 - 35                           |                                    |                            |                                | 35                      |                         |                              |                               | 26 - 35                 | 26 - 35                    | - 35      | - 35      | 26 - 35 | 26 - 35                 | 26 - 35                 |
| 1 - 132                                      | 1 - 126<br>1 - 130  |                           | 1 - 122   | 1 - 113<br>1 - 127                   | 1 - 122                         | 1 - 118                     | 1 - 129                                | 1 - 121                        | 1 - 118                     | 1 - 122                         | 1 - 120                       | 1 - 122   | 1 - 121   | 1 - 122                         | 1 - 125                            | 1 - 114                 | 1 - 124                           | 1 - 125                            | 1 - 117                    | 1 - 121                        | 1 - 114                 | 1 - 114                 | 1 - 119                      | 1 - 120                       | 1 - 114                 | 1 - 117                    | 1 - 114   | 1 - 114   | 1 - 114 | 1 - 114                 | 1 - 114                 |
| 243 - 251                                    | 233 - 243<br>236 - 247  | )                         | 1   | 234 - 244<br>234 - 244               | 227 - 237                       | 225 - 234                   | 1                                      | 227 - 237                      | 225 - 236                   | 229 - 239                       |                               | 229 - 239 | 228 - 238 | 229 - 239                       | 232 - 242                          | 221 - 231               | 1 - 241                           | 232 - 242                          | 222 - 232                  | 226 - 236                      | 218 - 226               | 219 - 229               | 221 - 231                    | 222 - 232                     | 219 - 229               | 223 - 232                  | 218 - 226 | 218 - 226 | 1       | - 1                     | 218 - 226               |
| - 210 24                                     | 200   | 188                       | 195   | 201                                  | 194                             | 35                          | 03                                     | 94                             | 92                          | 96                              | 46                            | 96        | 95        | 196                             | 199                                | 188                     | 198 231                           | 199                                | 189                        | 193                            | 185                     | 186                     | 188                          | 83 - 189 22                   | 186                     | 190                        | 185       | 185       | 183     | 186                     | 185 21                  |
| 204 -  | 194 -<br>197 -  | 182 -                     | 189 -   | 195 -                                | 188 -                           | 186-                        | 197 - 2                                | 188                            | 1                           | 190-                            | 188 -                         | 190 - 1   | 189 -     | 190 -                           | 193 -                              | <del>-</del>            | 192 -                             | 193 -                              | 183 -                      | 187 -                          | 179 -                   | 180 -                   | $\leftarrow$                 | 183 -                         | 180 -                   | 184 -                      | 179 -     | 179 -     | 177 -   | 1                       | 179 -                   |
| 173 - 188                                    | 5 - 178<br>9 - 181  | 6 - 166                   | 1 - 173   | 6 - 171<br>6 - 179                   | 2 - 172                         | 7 - 170                     | 8 - 181                                | 1                              | ī                           | 1 - 174                         | 9 - 172                       | 1 - 174   | 1 - 173   | 1 - 174                         | 4 - 177                            | 4 - 166                 | 3 - 176                           | 4 - 177                            | 7 - 167                    | 1 - 171                        | 3 - 163                 | 2 - 164                 | 56 - 166                     | 57 - 167                      | .52 - 164               | 55 - 168                   | 53 - 163  | 53 - 163  | 1 - 161 | 1                       | 53 - 163                |
|  | 254 165<br>258 169  |                           | 249 161   | -,                                   |                                 | 245 157                     | 258 168                                |                                |                             | 250 161                         | 248 159                       | 250 161   | 249 161   | 250 161                         | 253 164                            | 242 154                 | 252 163                           | 253 164                            | 243 157                    | 247 161                        | 237 153                 | 240 152                 | 242 15                       | 243 15                        | 240 15                  | 243 15                     | 237 15    | 237 15    | 237 151 | -                       | 237 15                  |
| 148 - 262                                    | 142 - 2:<br>146 - 2:  |                           | 1   | 143 - 2                              |                                 | 1                           | 1                                      | 1                              | 1                           | 1                               | 1                             | 138 - 2   | - 1       | - 1                             | - 1                                | 130 - 2                 | 1                                 | 141 - 2                            | 133 - 2                    | ì                              | 1                       | 1                       | 135 - 2                      | 136 - 2                       | 130 - 2                 | 133 - 2                    | 130 - 2   | 130 - 2   | 130 - 2 | 1                       | 130 - 2                 |
| 2081   | 2082 2083   | 2084                      | 2085  | 2087                                 | 2088                            | 2089                        | 2090                                   | 2091                           | 2092                        | 2093                            | 2094                          | 2095      | 2096      | 2097                            | 2098                               | 2099                    | 2100                              | 2101                               | 2102                       | 2103                           | 2104                    | 2105                    | 2106                         | 2107                          | 2108                    | 2109                       | 2110      | 2111      | 2112    | 2113                    | 2114                    |
| I083D07                                      | 1083D08<br>1083D10  | I083D12                   | 1083E02   | 1083E03<br>1083E04                   | 1083E08                         | I083E12                     | I083F02                                | I083F04                        | I083F06                     | I083F08                         | I083F11                       | 1083G04   | I083G05   | 1083G06                         | I083G08                            | 1083G09                 | I083G11                           | I083H04                            | 1083H05                    | I083H07                        | I084A03                 | I084A08                 | I084B08                      | I084C02                       | I084D03                 | I084D05                    | I084E01   | 1084E06   | I084E10 | I084E12                 | I084F04                 |

| 218 - 226 1 - 114 | 192 225 - 234 1 - 119 26 - 35 50 - 66 99 - 108 ESLTGDAFDI (SEQ ID NO: 3116) | 219-229 1-114 26-35 50-66 99-103 1 | 218-226 1-114 26-35 50-66 99-103 1 | 202 235 - 245 1 - 129 26 - 35 50 - 66 99 - 118 GAHYYDRSPSHLKSYWYFDL (SEQ ID NO: 3149) | 228-238 1-122 26-35 50-66 99-111 | 227-237 1-122 26-35 50-66 99-111 ] | 228-238 1-122 26-35 50-66 99-111 | 234-244 1-128 26-35 50-66 99-117 0 | 227-236 1-120 26-35 50-66 99-109 ] | 230-240 1-124 26-35 50-66 99-113 | 227 - 236 1 - 120 26 - 35 50 - 66 99 - 109 1 | 227 - 236 1 - 120 26 - 35 50 - 66 99 - 109 1 | 230-240 1-124 26-35 50-66 99-113 | 228-236 1-124 31-35 50-65 99-113 1 | 224-234 1-119 31-35 50-66 99-108 | 228-236 1-124 31-35 50-65 99-113 ( | 231-240 1-125 31-35 50-66 99-114 ] | 232-242 1-128 31-35 50-66 99-117 0 | 231-246 1-125 31-35 50-66 99-114 | 238-247 1-132 31-37 52-69 102-121 | 197 230-239 1-125 31-35 50-66 99-114 ATYDPLTGYSFDGFD |
|-------------------|---|------------------------------------|------------------------------------|---|----------------------------------|------------------------------------|----------------------------------|------------------------------------|------------------------------------|----------------------------------|--|--|----------------------------------|------------------------------------|----------------------------------|------------------------------------|------------------------------------|------------------------------------|----------------------------------|-----------------------------------|--|
| 9-185 218-        | 225 -   | ٠.                                 | ٠.                                 | ٠,  | 228 -                            | 227 -                              |                                  |                                    |                                    |                                  | 22,7   | 227  |                                  | 189 - 195 228 -                    | 5 - 191 224 -                    | 9 - 195 228 -                      | 2 - 198 231 -                      | 3 - 199 232 -                      | 2 - 198 231 -                    |                                   |  |
| 17                | 157 - 170 180   | 152 - 164 18                       | 153 - 163 179                      | 168 - 180 19  | 161 - 173 189                    | 162 - 172 18                       | 161 - 173 18                     | 167 - 179 19                       | 159 - 172 18                       | 163 - 175 19                     | 159 - 172 18                                 | 159 - 172 18                                 | 163 - 175 19                     | 163 - 173 189                      | 157 - 169 18                     | 163 - 173 189                      | 163 - 176 19                       | 167 - 177 19                       | 163 - 176 19                     | 170 - 183 199                     |  |
| 237               | 245   | 240                                | 237                                | 256   | 249                              | 248                                | 249                              | 255                                | 247                                | 251                              | 247  | 247  | 251                              | 247                                | 245                              | 247                                | 251                                | 253                                | 251                              | 146 - 258                         | 250  |
| 2115              | 2116  | 2117                               | 2118                               | 2119  | 2120                             | 2121                               | 2122                             | 2123                               | 2124                               | 2125                             | 2126   | 2127   | 2128                             | 3240                               | 3241                             | 3242                               | 3243                               | 3244                               | 3245                             | 3246                              | 3247   |
| I084F07           | I084F12   | I084G12                            | I084H02                            | 1099B05   | 609660I                          | 1099H01                            | 90H660I                          | 80H660I                            | I100A01                            | I100A10                          | I100B03                                      | 1100B04                                      | I100C03                          | BAB2001                            | BAB2080                          | BAB2015                            | BAB2019                            | BAB2087                            | BAB2016                          | BAB2034                           | BAB2065  |

|   | Applicant's File  |           | International Applicati | ON         |
|---|-------------------|-----------|-------------------------|------------|
| ] | Reference Number: | PF523PCT2 | Number:                 | Unassigned |

# INDICATIONS RELATING TO DEPOSITED BIOLOGICAL MATERIAL

(PCT Rule 13bis)

| A. | The indications made below relate to the deposited biological material referred to on page 155 in Table |
|----|---|
|    | 2, on page 24, paragraph 63, and on page 24, paragraph 64 of the description.                           |

|    | 2, on page 24, paragraph 63, and on page 24, paragraph 64 of the description. |   |   |  |  |  |  |
|----|---|---|---|--|--|--|--|
| В. | IDENTIFICATION (  | OF DEPOSIT:   | Further deposits are identified on an additional sheet: |  |  |  |  |
|    | me of Depository:<br>dress of Depository:                                     | American Type Culture Collection<br>10801 University Boulevard<br>Manassas, Virginia 20110-2209<br>United States of America |   |  |  |  |  |

|   | Accession<br>Number | Date of<br>Deposit |   | Accession<br>Number | Date of<br>Deposit |
|---|---------------------|--------------------|---|---------------------|--------------------|
| 1 | PTA-3238            | 27-Mar-2001        | 2 | PTA-3239            | 27-Mar-2001        |
| 3 | PTA-3240            | 27-Mar-2001        | 4 | PTA-3241            | 27-Mar-2001        |
| 5 | PTA-3242            | 27-Mar-2001        | 6 | PTA-3243            | 27-Mar-2001        |
| 7 | 97768               | 22-Oct-1996        | 8 | 203518              | 10-Dec-1998        |

#### **CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

#### **NORWAY**

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual case.

## **AUSTRALIA**

The applicant hereby gives notice that the furnishing of a sample of a microorganism shall only be effected prior to the grant of a patent, or prior to the lapsing, refusal or withdrawal of the application, to a person who is a skilled addressee without an interest in the invention (Regulation 3.25(3) of the Australian Patents Regulations).

## **FINLAND**

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

## UNITED KINGDOM

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.

## **DENMARK**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later that at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

#### **SWEDEN**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Swedish Patent Office), or has been finally decided upon by the Swedish Patent Office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the International Bureau before the expiration of 16 months from the priority date (preferably on the Form PCT/RO/134 reproduced in annex Z of Volume I of the PCT Applicant's Guide). If such a request has been filed by the applicant any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Swedish Patent Office or any person approved by a applicant in the individual case.

#### **NETHERLANDS**

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

## WHAT IS CLAIMED IS:

1. An antibody that immunospecifically binds to a protein consisting of amino acid residues 134-285 of SEQ ID NO:3228 and a protein consisting of amino acid residues 105-250 of SEQ ID NO:3239 comprising a first amino acid sequence at least 95% identical to a second amino acid sequence selected from the group consisting of:

- (a) an amino acid sequence comprising the amino acid sequence of a VHCDR of any one of the scFvs of SEQ ID NOS:3240 through 3247; and
- (b) an amino acid sequence comprising the amino acid sequence of a VLCDR of any one of the scFvs of SEQ ID NOS: 3240 through 3247.
- 2. The antibody of claim 1, wherein the second amino acid sequence consists of the amino acid sequence of a VH domain of any one of the scFvs of SEQ ID NOS: 3240 through 3247.
- 3. The antibody of claim 1, wherein the second amino acid sequence consists of the amino acid sequence of a VL domain of any one of the scFvs of SEQ ID NOS: 3240 through 3247.
- 4. The antibody of claim 2, which also comprises an amino acid sequence at least 95% identical to the amino acid sequence of a VL domain of any one of the scFvs of SEQ ID NOS:3240 through 3247.
- 5. The antibody of claim 4, wherein the VH and VL domains are from the same scFv.
- 6. The antibody of claim 1 wherein the first amino acid sequence is identical to the second amino acid sequence.
- 7. The antibody of claim 6 wherein the second amino acid sequence consists of the amino acid sequence of a VH domain of any one of the scFvs of SEQ ID NOS:3240 through 3247.

8. The antibody of claim 6 wherein the second amino acid sequence consists of the amino acid sequence of a VL domain of any one of the scFvs of SEQ ID NOS:3240 through 3247.

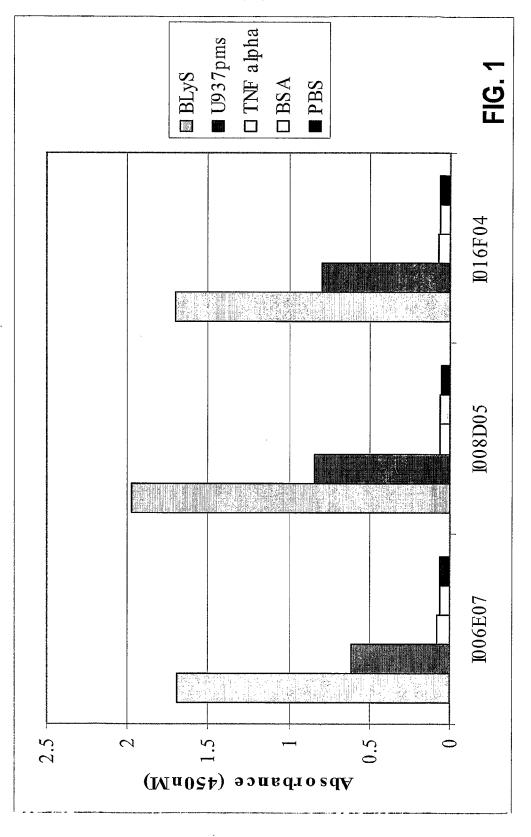
- 9. The antibody of claim 8 which also comprises an amino acid sequence 100% identical to the amino acid sequence of a VL domain of any one of the scFvs of SEO ID NOS:3240 through 3247.
- 10. The antibody of claim 1, wherein the antibody is selected from the group consisting of:
  - (a) a whole immunoglobulin molecule;
  - (b) an scFv;
  - (c) a monoclonal antibody;
  - (d) a human antibody;
  - (e) a chimeric antibody;
  - (f) a humanized antibody;
  - (g) a Fab fragment;
  - (h) an Fab' fragment;
  - (i) an F(ab')2;
  - (j) an Fv; and
  - (k) a disulfide linked Fv.
- 11. The antibody of claim 1, wherein the antibody has a dissociation constant (K<sub>D</sub>) selected from the group consisting of:
  - (a) a dissociation constant  $(K_D)$  between  $10^{-7}$  M and  $10^{-8}$  M;
  - (b) a dissociation constant (K<sub>D</sub>) between 10<sup>-8</sup> M and 10<sup>-9</sup> M;
  - (c) a dissociation constant ( $K_D$ ) between  $10^{-9}$  M and  $10^{-10}$  M;
  - (d) a dissociation constant ( $K_D$ ) between  $10^{-10}$  M and  $10^{-11}$  M;
  - (e) a dissociation constant  $(K_D)$  between  $10^{-11}$  M and  $10^{-12}$  M; and
  - (f) a dissociation constant ( $K_D$ ) between  $10^{-12}\,M$  and  $10^{-13}\,M$ .
  - 12. The antibody of claim 1, wherein the antibody is labeled.

- 13. The antibody of claim 12, which is labeled with a radiolabel.
- 14. The antibody of claim 13, wherein the radiolabel is  $^{125}$ I,  $^{131}$ I,  $^{111}$ In,  $^{90}$ Y,  $^{99}$ Tc,  $^{177}$ Lu,  $^{166}$ Ho, or  $^{153}$ Sm,  $^{215}$ Bi, or  $^{225}$ Ac.
- 15. The antibody of claim 12, which is labeled with an enzyme, a fluorescent label, a luminescent label, or a bioluminescent label.
  - 16. The antibody of claim 1, wherein the antibody is biotinylated.

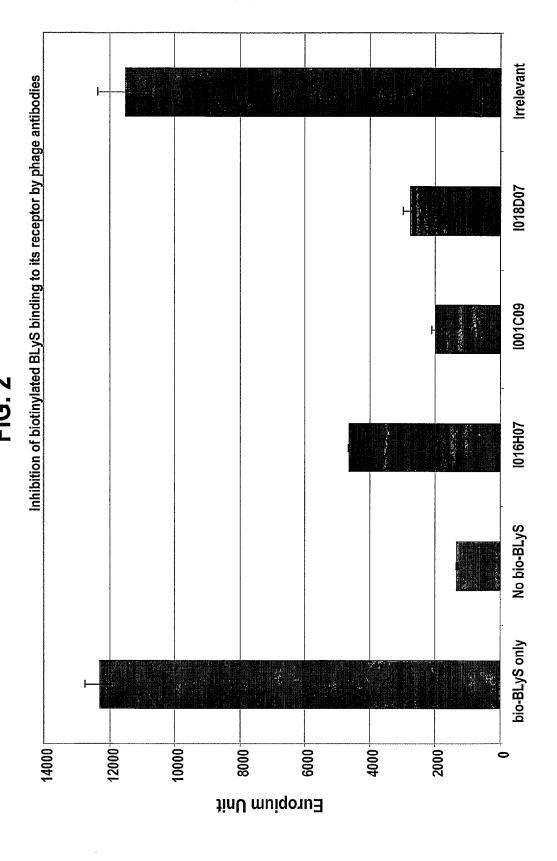
The antibody of claim 1, wherein the antibody is conjugated to a therapeutic or cytotoxic agent.

- 17. The antibody of claim 1 in a pharmaceutically acceptable carrier.
- 18. A kit comprising the antibody of claim 1.
- 19. An isolated nucleic acid molecule encoding the antibody of claim 1.
- 20. A vector comprising the isolated nucleic acid molecule of claim 19.
- 21. The vector of claim 20 which also comprises a nucleotide sequence which regulates the expression of the antibody encoded by the nucleic acid molecule.
  - 22. A host cell comprising the nucleic acid molecule of claim 19.
  - 23. A cell line engineered to express the antibody of claim 1.
- 24. An antibody that competes with the antibody of claim 1 for binding to a protein consisting of amino acid residues 134-285 of SEQ ID NO:3228 and a protein consiting of amino acid residues 105-250 of SEQ ID NO:3239.

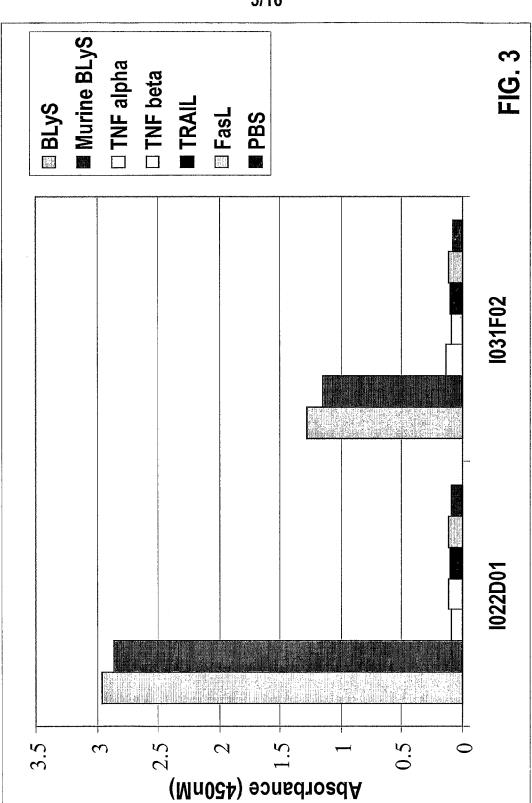




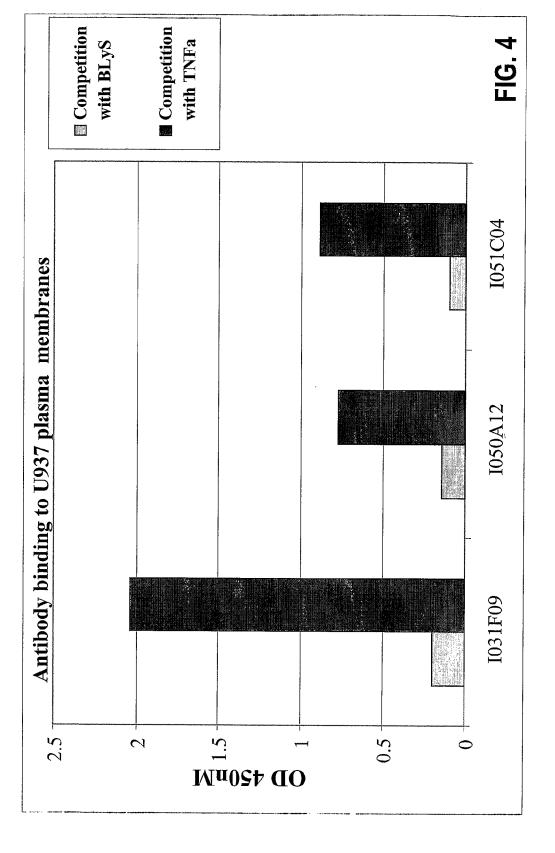
2/16

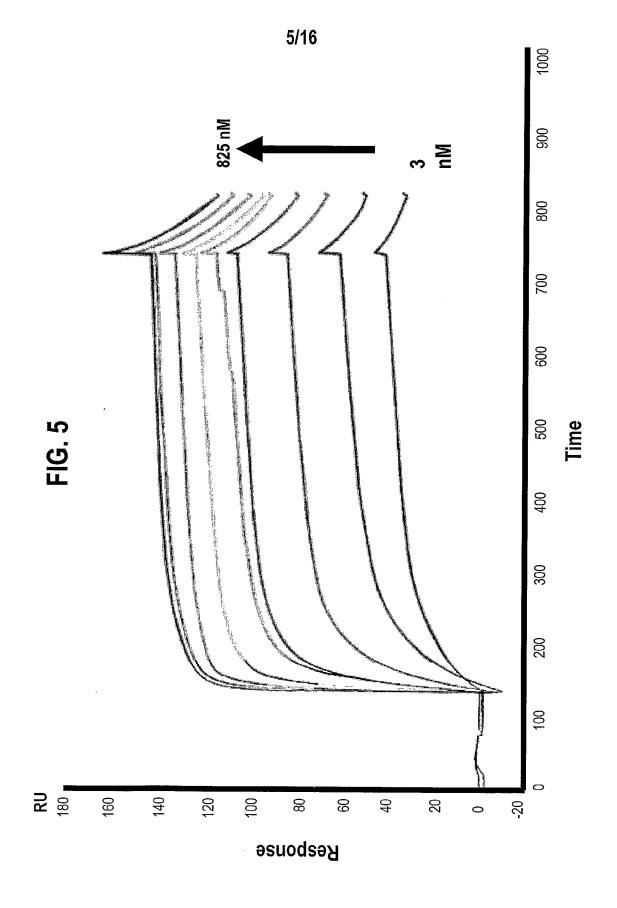


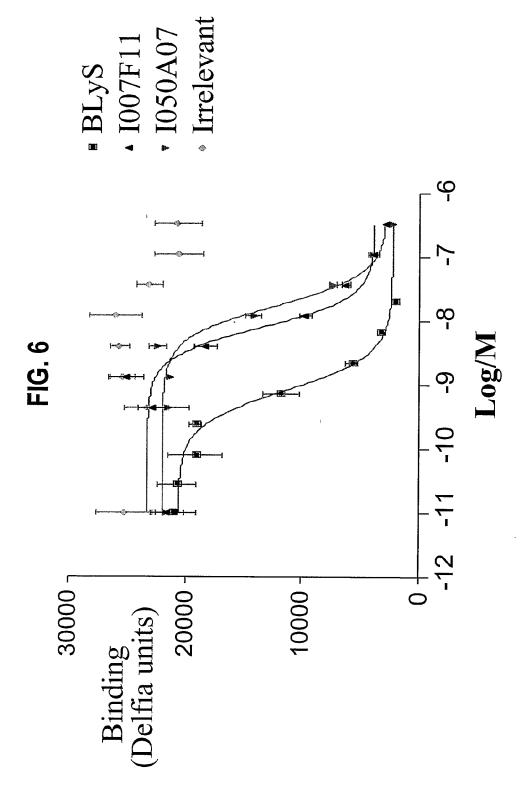




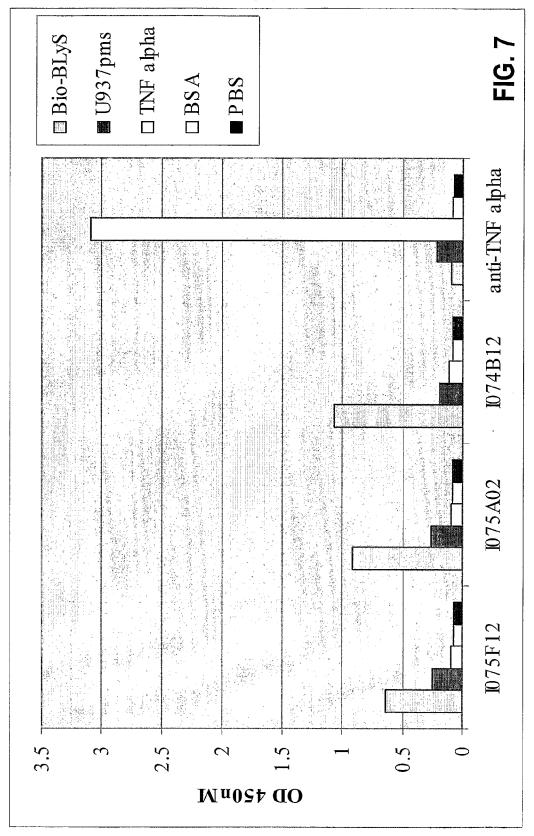


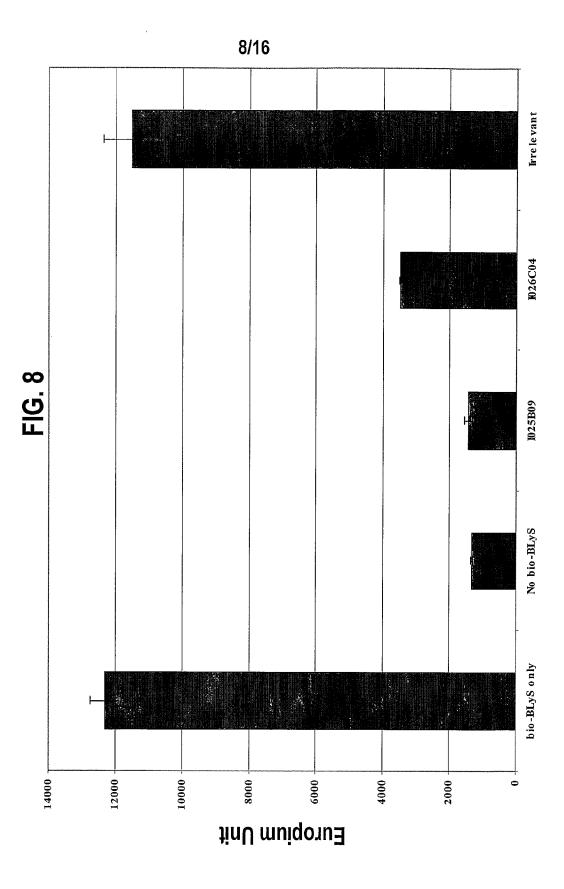




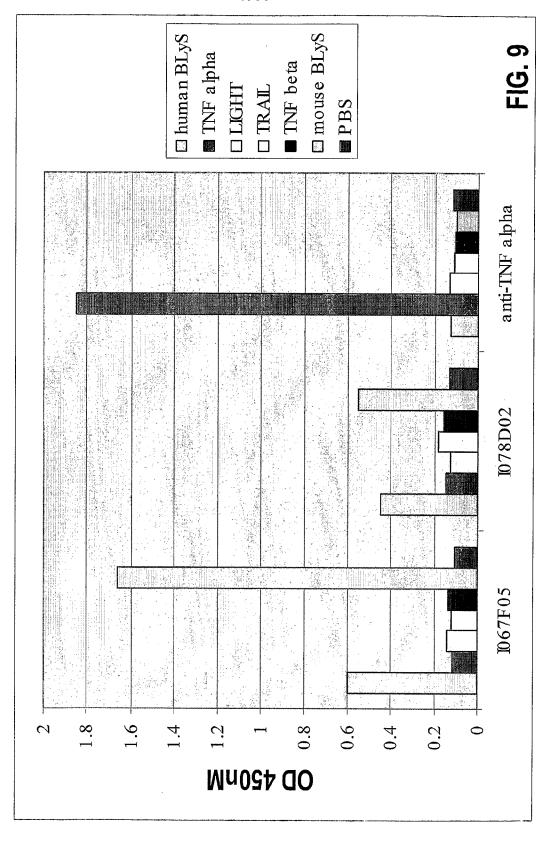


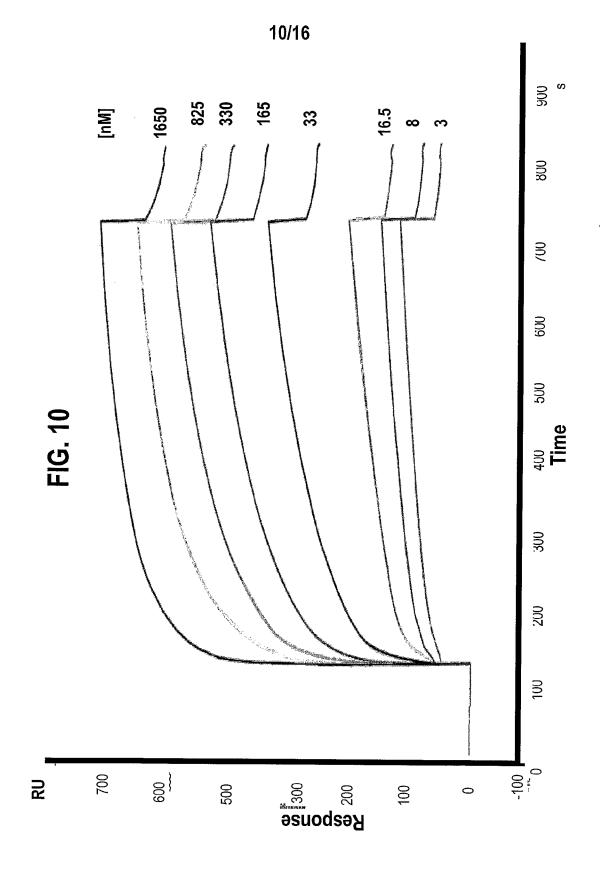


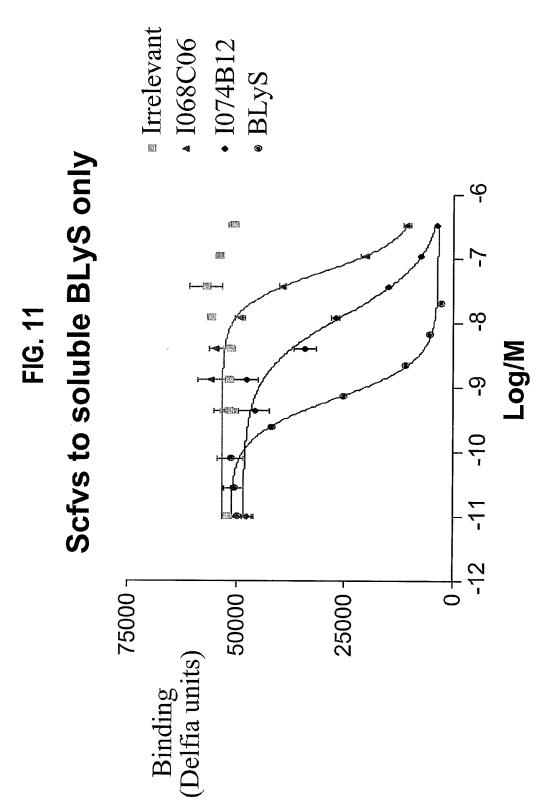




9/16

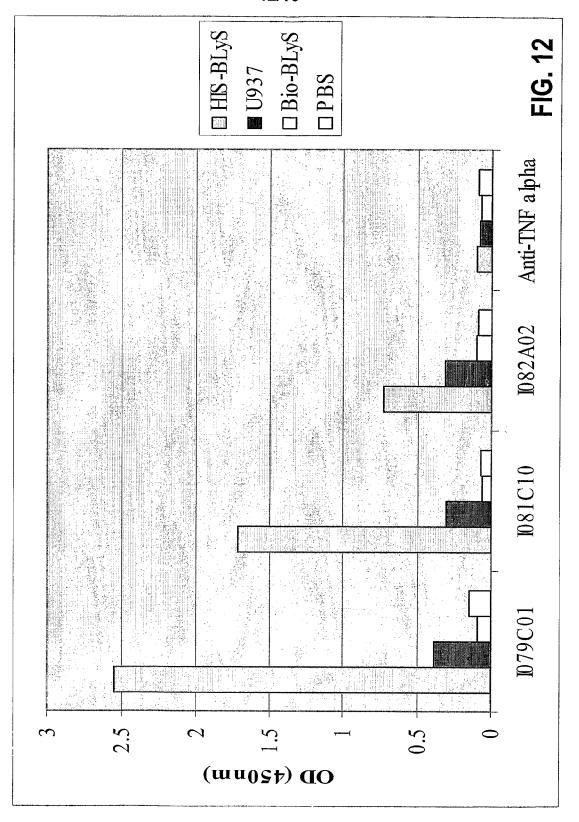




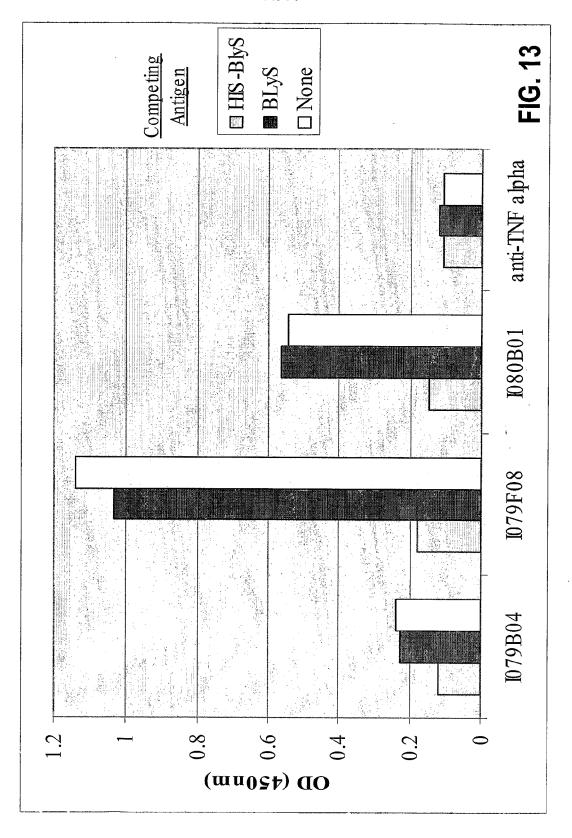


11/16

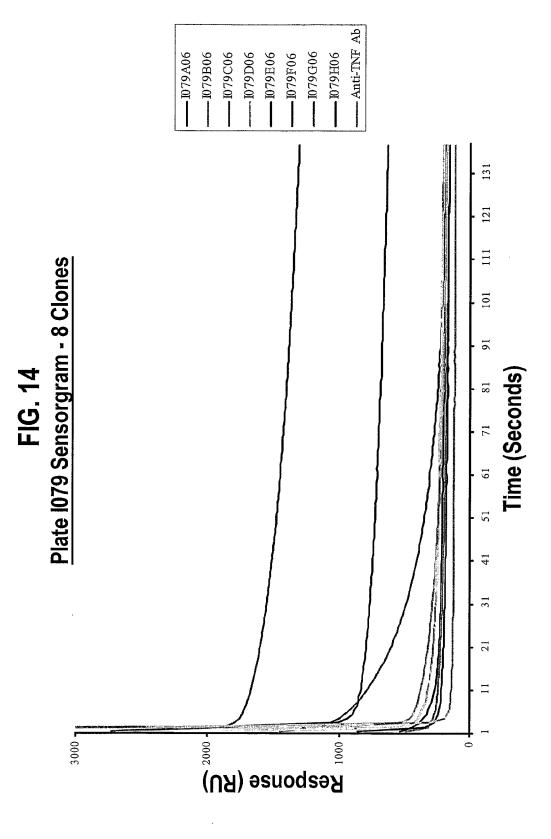
12/16



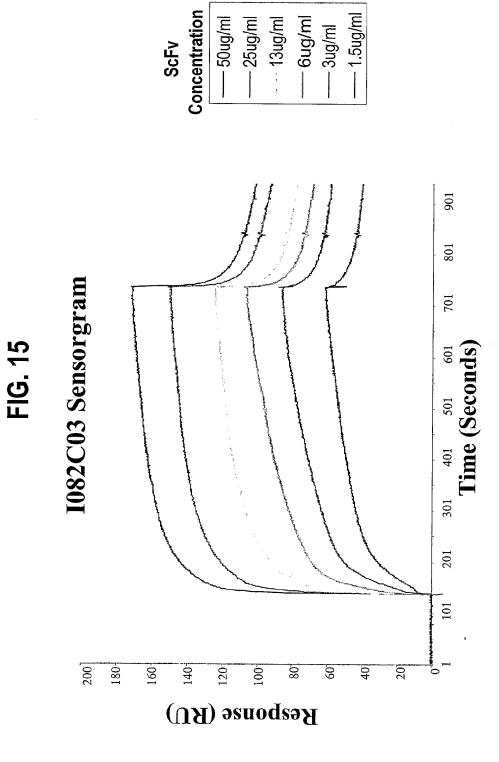
13/16



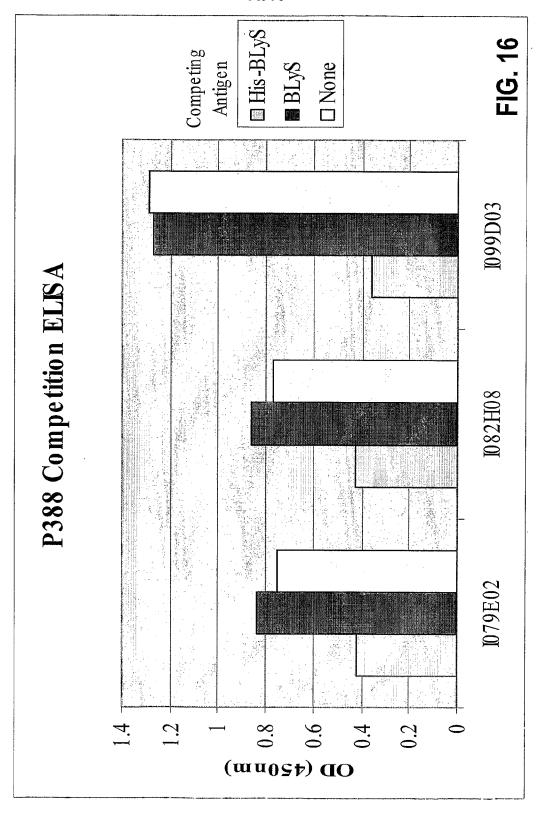
14/16



15/16



16/16



## SEQUENCE LISTING

<110> Human Genome Sciences, Inc.

<120> Antibodies that Immunospecifically Bind BLyS

<130> PF523PCT2

<140> Not yet assigned

<141> 2002-11-14

<150> 60/331,469

<151> 2001-11-16

<150> 60/340,817

<151> 2001-12-19

<160> 3247

<210> 1

<211> 248

<212> PRT

<213> Homo sapiens

<400> 1

Gln Val Gln Leu Leu Gln Ser Ala Ala Glu Leu Lys Lys Pro Gly Gln 1  $\phantom{-}$  10  $\phantom{-}$  15

Ser Leu Lys Ile Ser Cys Lys Gly Ser Gly Phe Thr Phe Thr Tyr 20 25 , 30

Trp Ile Gly Trp Val Arg Gln Leu Pro Gly Lys Gly Leu Glu Trp Met 35 40 45

Gly Ile Ile Tyr Pro Gly Asp Ser His Thr Thr Tyr Ser Pro Ser Phe
50 60

Glu Gly His Val Asn Ile Ser Val Asp Lys Ser Ile Asn Thr Ala Tyr

65 70 75 80

Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys 85 90 95

Ala Arg His Asp Asp Asp Val Leu Thr Gly Tyr Tyr Phe Glu Ser Trp
100 105 110

Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly 115 120 125

Gly Gly Gly Ser Gly Gly Gly Ser Gln Ser Val Leu Thr Gln Pro 130 135 140

Ala Ser Val Ser Gly Ser Pro Gly Gln Ser Ile Thr Ile Ser Cys Thr 145 150 155 160

Gly Thr Ser Ser Asp Val Gly Gly Tyr Asn Tyr Val Ser Trp Tyr Gln
165 170 175

Gln His Pro Gly Lys Ala Pro Lys Leu Met Ile Tyr Glu Gly Ser Lys 180 185 190

Arg Pro Ser Gly Val Ser Asn Arg Phe Ser Gly Ser Lys Ser Gly Asn 195 200 205

Thr Ala Ser Leu Thr Ile Ser Gly Leu Gln Ala Glu Asp Glu Ala Asp 210 215 220

Tyr Tyr Cys Ser Ser Tyr Thr Thr Arg Ser Thr Arg Val Phe Gly Gly 225 230 235

Gly Thr Lys Leu Thr Val Leu Gly 245

<210> 2

<211> 249

<212> PRT

<213> Homo sapiens

Ser Val Arg Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Asn Asn Asn 20 25 30

Ala Ile Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met 35 40 45

- Gly Gly Ile Ile Pro Met Phe Gly Thr Ala Lys Tyr Ser Gln Asn Phe 50 55 60
- Gln Gly Arg Val Ala Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Ser 65 70 75 80
- Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys 85 90 95
- Ala Arg Ser Arg Asp Leu Leu Leu Phe Pro His Tyr Gly Met Asp Val
- Trp Gly Arg Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser 115 120 125
- Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Phe Ser Ser Glu Leu 130 135
- Thr Gln Asp Pro Ala Val Ser Val Ala Leu Gly Gln Thr Val Arg Val 145 150 150
- Thr Cys Gln Gly Asp Ser Leu Arg Ser Tyr Tyr Ala Ser Trp Tyr Gln 165 170 175
- Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr Gly Lys Asn Asn 180 185 190
- Arg Pro Ser Gly Ile Pro Asp Arg Phe Ser Gly Ser Ser Ser Gly Asn 195 200 205
- Thr Ala Ser Leu Thr Ile Thr Gly Ala Gln Ala Glu Asp Glu Ala Asp 210 215
- Tyr Tyr Cys Asn Ser Arg Asp Ser Ser Gly Asn His Trp Val Phe Gly 225 230 230
- Gly Gly Thr Glu Leu Thr Val Leu Gly 245

<210> 3

<211> 254

<212> PRT

<213> Homo sapiens

<400> 3
Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
10
15

Ile Leu Ser Leu Thr Cys Ala Ile Ser Gly Asp Ser Val Ala Ser Asn 20 25 30

Gly Ala Ala Trp Asn Trp Ile Arg Gln Ser Pro Ser Arg Gly Leu Glu
35 45

Trp Leu Gly Arg Thr Tyr Tyr Arg Ser Lys Trp Tyr Val Asp Tyr Ala 50 55

Val Ser Val Lys Ser Arg Ile Thr Ile Asn Pro Asp Thr Ser Lys Asn 65 70 75 80

Gln Phe Ser Leu Gln Leu Asn Ser Val Thr Pro Glu Asp Thr Ala Val 85 90 95

Tyr Tyr Cys Ala Arg Asp Arg Tyr Asp Ile Leu Thr Gly Tyr Tyr Tyr 100 105

Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser 115

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Gln
130 135 140

Ser Ala Leu Thr Gln Pro Ala Ser Val Ser Gly Ser Arg Gly Gln Ser 145 150 155 160

Ile Thr Ile Ser Cys Thr Gly Thr Thr Gly Asp Val Gly Gly Tyr Asp 165 170 175

Tyr Val Ser Trp. Tyr Gln Gln His Pro Gly Lys Ala Pro Lys Leu Leu 180 . 185 . 190

Ile Tyr Gly Asn Ser Asn Arg Pro Ser Gly Val Pro Asp Arg Phe Ser 195 200 205

Ala Ser Lys Ser Gly Asn Thr Ala Ser Leu Thr Ile Ser Gly Leu Gln 210

Ala Glu Asp Glu Ala Asp Tyr Phe Cys Ser Thr Tyr Ala Pro Pro Gly

225 230 235 240

Ile Ile Met Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly 245 250

<210> 4

<211> 255

<212> PRT

<213> Homo sapiens

<400> 4

Arg Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala

1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Asp 20 25 30

His Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met 35 40 45

Gly Trp Ile Ser Pro His His Gly Lys Thr Asn Tyr Ala Gln Lys Leu 50 55 60

Gln Gly Arg Val Thr Met Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Val Gln Met Asp Ser Glu Tyr Tyr Asp Leu Leu Thr Gly Ile 100 105 110

Asn Val Gly Pro Tyr Tyr Phe Asp Tyr Trp Gly Lys Gly Thr Leu Val 115 120 125

Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly 130 135 140

Gly Gly Ser Ser Glu Leu Thr Gln Asp Pro Ala Val Ser Val Ala Leu 145 150 155 160

Gly Gln Thr Val Arg Ile Thr Cys Gln Gly Asp Ser Leu Arg Ser Tyr 165 . 170 . 175

Tyr Ala Ser Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val 180 185 190

Ile Tyr Gly Lys Asn Asn Arg Pro Ser Gly Ile Pro Asp Arg Phe Ser 195 200 205

Gly Ser Ser Ser Gly Asn Thr Ala Ser Leu Thr Ile Thr Gly Ala Gln 210 215 220

Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Asn Ser Arg Asp Ser Ser Gly 225 230 230

Asn His Val Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly 245 250 255

<210> 5

<211> 249

<212> PRT

<213> Homo sapiens

<400> 5 Glu Val Asn Leu Arg Glu Ser Gly Gly Gly Val Asp Gln Pro Gly Arg 1 1 5 10 15 ...

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr 20 25 30

Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Val Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val 50 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr 65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Lys Asp Gly Tyr Tyr Asp Ile Leu Thr Gly Tyr Ser Tyr Tyr Gly 100 105

Met Asp Val Trp Gly Gln Gly Pro Met Val Ala Val Ser Ser Gly Gly 115 120 125

Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ser Glu Leu 130 135

Thr Gln Asp Pro Ala Val Ser Val Ala Leu Gly Gln Thr Val Arg Ile

145 150 155 160

Thr Cys Gln Gly Asp Ser Leu Arg Ser Tyr Tyr Thr Asn Trp Phe Gln
165 170 175

Gln Lys Pro Gly Gln Ala Pro Leu Leu Val Val Tyr Ala Lys Asn Lys
180 185 190

Arg Pro Ser Gly Ile Pro Asp Arg Phe Ser Gly Ser Ser Ser Gly Asn 195 200 205

Thr Ala Ser Leu Thr Ile Thr Gly Ala Gln Ala Glu Asp Glu Ala Asp 210 215 220

Tyr Tyr Cys Asn Ser Arg Asp Ser Ser Gly Asn His Val Val Phe Gly 225 230 240

Gly Gly Thr Lys Leu Thr Val Leu Gly 245

<210> 6

<211> 251

<212> PRT

<213> Homo sapiens

<400> 6 Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Arg Lys Pro Gly Ser 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Cly Gly Ser Phe Ser Ser His 20 25 30

Val Phe Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Gly Ile Thr Pro Lys Phe Ala Thr Pro Asn Tyr Ala Gln Lys Phe 50 60

Gln His Arg Val Thr Ile Thr Ala Asp Glu Leu Thr Arg Thr Val Phe 65 70 75 80

Met Asp Leu Ser Gly Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Gly Tyr Asp Ser Ser Ala Phe Arg Ala Phe Asp Ile Trp Gly 100 105 110

Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Ser Gly Gly 115 120

Gly Gly Ser Gly Gly Gly Ser Ala Gln Ser Val Leu Thr Gln Pro . 135

Pro Ser Val Ser Gly Ala Pro Gly Gln Arg Val Thr Ile Ser Cys Thr 155 145

Gly Ser Ser Ser Asn Ile Gly Ala Gly Tyr Asp Val Gln Trp Tyr Gln 170 , 175 165

Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu Ile His Gly Asn Asn Asn 180 185

Arg Pro Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Lys Ser Gly Thr 195 200

Ser Ala Ser Leu Ala Ile Thr Gly Leu Gln Asp Glu Asp Glu Ala Asp 210 215

Tyr Tyr Cys Gln Ser Tyr Asp Ser Ser Leu Ser Phe Ser Gly Tyr Val 230 225

Phe Gly Thr Gly Thr Lys Val Thr Val Leu Gly 250 245

<210> 7

<211> 250

<212> PRT

<213> Homo sapiens

Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser 5 . 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Asp Thr Phe Ser His Tyr . 20 25

Ala Ile Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met 35

Gly Gly Ile Ile Pro Thr Phe Asn Ala Val Lys Tyr Ala Gln Lys Phe 55 60

Gln Gly Arg Ala Thr Ile Thr Ala Asp Gly Ser Thr Ser Thr Ala Tyr

65 70 75 80

Met Glu Leu Asn Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Thr Ala Pro Tyr Asp Leu Leu Thr His Tyr Phe His Tyr Phe Asp 100 105 110

Tyr Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115

Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Ser Ser Glu 130 135 140

Leu Thr Gln Asp Pro Ala Val Ser Val Thr Leu Gly Gln Thr Val Arg 145 150 150

Ile Thr Cys Gln Gly Asp Ser Leu Arg Ser Tyr Tyr Pro Ser Trp Tyr 165 170 175

Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr Pro Lys Asn 180 185

Ile Arg Pro Ser Gly Ile Pro Asp Arg Phe Ser Gly Ser Ser Ser Gly 195 200 . 205

Asn Thr Ala Ser Leu Thr Ile Thr Gly Ala Gln Ala Glu Asp Glu Ala 210 215 220

Asp Tyr Tyr Cys Asn Ser Arg Ala Ser Ser Gly Asn His Tyr Val Phe 225 230 230 235 235

Ala Thr Gly Thr Lys Leu Thr Val Leu Gly
245 250

<210> 8

<211> 256

<212> PRT

<213> Homo sapiens

 $<\!400\!>$  8 Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser 1 10 15

Ser Val Lys Val Ser Cys Arg Thr Ser Gly Gly Thr Phe Ser Asn Tyr 20 25 30

Gly Leu Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met 35 40 45

- Gly Gly Val Ile Pro Ile Ser Ser Thr Ile Lys Tyr Gly Gln Lys Phe 50 55 60
- Gln Asp Arg Leu Thr Ile Ala Ala Asp Asp Leu Thr Asn Thr Thr Phe
  65 70 80
- Met Glu Leu Ser Ser Leu Arg Pro Glu Asp Thr Ala Val Tyr Tyr Cys 85 90 95
- Ala Arg Ala Ala Thr Thr Ser Gln Lys His Asn Lys Tyr Ala Tyr Tyr 100 105 110
- Phe Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Met Val Thr Val Ser
- Ser Gly Gly Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Gly Ser 130 135
- Ala Gln Ser Ala Leu Thr Gln Pro Ala Ser Val Ser Gly Ser Pro Gly 145 150 155 160
- Gln Ser Ile Thr Ile Ser Cys Thr Gly Thr Ser Ser Asp Val Gly Gly 165 170
- Tyr Asn Tyr Val Ser Trp Tyr Gln Gln His Pro Gly Lys Ala Pro Lys 180 185 190
- Leu Met Ile Tyr Glu Val Ser Asn Arg Pro Ser Gly Val Ser Asn Arg 195 200 205
- Phe Ser Gly Ser Lys Ser Gly Asn Thr Ala Ser Leu Thr Ile Ser Gly 210 215 220
- Leu Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Ser Ser Tyr Thr Ser 225 230 230 235
- Ser Ser Thr Leu Val Phe Gly Gly Gly Thr Lys Val Thr Val Leu Gly 245 250

<210> 9

<211> 251

<212> PRT

<213> Homo sapiens

<400> 9
Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala
1 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 10

<211> 251

<212> PRT

<213> Homo sapiens

<400> 10

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Val Trp 100 105 110

Val Ala Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 11

<211> 251

<212> PRT

<213> Homo sapiens

<400> 11

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 . 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Val Trp 100 105 110

Val Ala Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 · 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Lys Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 12

<211> 251

<212> PRT

<213> Homo sapiens

<400> 12

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Arg Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 13

<211> 251

<212> PRT

<213> Homo sapiens

 $<\!400\!>$  13 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Gly Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 150

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Lys Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 230 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 14

<211> 251

<212> PRT

<213> Homo sapiens

<400> 14
Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30 .

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

- Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60
- Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80
- Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
  85 90 95
- Ala Arg Pro Phe Tyr Asp Thr Leu Thr Arg Tyr Val Phe Gln Val Trp 100 105 110
- Val Ala Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125
- Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135
- Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 150 155 160
- Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175
- Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185
- Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195
- Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215
- Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240
- Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 15

<211> 251

<212> PRT

<213> Homo sapiens

<400> 15
Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Glm Ala Pro Gly Glm Gly Leu Glu Trp Val 35 40 45 .

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Gly Tyr Val Phe Gln Val Trp 100 105 110

Val Ala Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 16

<211> 251

<212> PRT

<213> Homo sapiens

<400> 16

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Arg Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Lys Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 17

<211> 251

<212> PRT

<213> Homo sapiens

<400> 17

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Gly Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 18

<211> 251

<212> PRT

<213> Homo sapiens

<400> 18

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Cly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Arg Tyr Val Phe Gln Val Trp 100 105 110

Val Ala Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser-Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Lys Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 19

<211> 251

<212> PRT

<213> Homo sapiens

<400> 19

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Arg Tyr Val Phe Gln Val Trp
100 105 110

Val Ala Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 150 155

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190 -

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

<210> 20

<211> 251

<212> PRT

<213> Homo sapiens

<400> 20

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Gly Tyr Val Phe Gln Val Trp 100 105 110

Val Ala Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Lys Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 21

<211> 251

<212> PRT

<213> Homo sapiens

<400> 21

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Gly Tyr Val Phe Gln Val Trp
100 105 110

Val Ala Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160.

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

240 235 230 225

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg , 245

<210> 22

<211> 251

<212> PRT

<213> Homo sapiens

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala . 10 . 5

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 40

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 90 85

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 125 115,

Gly Ser Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr . 180

Gly Ala Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220 .

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 23

<211> 251

<212> PRT

<213> Homo sapiens

<400> 23

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Lys Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Ala Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 ,220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys. Arg 245 250

<210> 24

<211> 251

<212> PRT

<213> Homo sapiens

<400> 24

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His
20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr
65 70. 75

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Val Trp
100 105 110

Val Ala Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Met Tyr 180 185 190

Gly Ala Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 25

<211> 251

<212> PRT

<213> Homo sapiens

<400> 25

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 75 80

The Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Val Trp 100 \, 105

Val Ala Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Lys Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Ala Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195  $\phantom{\bigg|}200\phantom{\bigg|}205\phantom{\bigg|}$ 

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 26

<211> 251

<212> PRT

<213> Homo sapiens

<400> 26

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 . 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Arg Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Ala Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 27

<211> 251

<212> PRT

<213> Homo sapiens

<400> 27

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His
20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 . 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Arg Tyr Val Phe Gln Tyr Phe
100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Lys Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Ala Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 28

<211> 251

<212> PRT

<213> Homo sapiens

<400> 28

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$ 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Ile Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Ala Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 29

<211> 251

<212> PRT

<213> Homo sapiens

<400> 29

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys  $85 \hspace{1.5cm} 90 \hspace{1.5cm} 95$ 

Ala Arg Pro Phe Tyr Asp Ile Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr  $130 \,$   $135 \,$   $140 \,$ 

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Lys Arg .

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Ala Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 30

<211> 251

<212> PRT

<213> Homo sapiens

<400> 30

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Ile Leu Thr Arg Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr  $130 \,$   $135 \,$   $140 \,$ 

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 150 155

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Ala Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 31

<211> 251

<212> PRT

<213> Homo sapiens

<400> 31

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His
20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 . 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Ile Leu Thr Arg Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leü Ser Pro Gly Lys Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Ala Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 32

<211> 251

<212> PRT

<213> Homo sapiens

400> 32

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His  $20 \\ \hspace{1.5cm} 25 \\ \hspace{1.5cm} 30$ 

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

- Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60
- Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80
- Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
  85 90 95
- Ala Arg Pro Phe Tyr Asp Ile Leu Thr Arg Tyr Val Phe Gln Tyr Phe 100 105 110
- Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125
- Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140
- Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 150 155 160
- Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175
- Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190
- Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205
- Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220
- Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240
- Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<sup>&</sup>lt;210> 33

<sup>&</sup>lt;211> 251

<sup>&</sup>lt;212> PRT

<213> Homo sapiens

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Ile Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 150

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Met Tyr 180 185

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg  $245 \ \ \, 250$ 

<210> 34

<211> 251

<212> PRT

<213> Homo sapiens

<400> 34

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His
20
30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Arg Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Lys Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 195 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 35

<211> 251

<212> PRT

<213> Homo sapiens

<400> 35

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35
40
45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Ile Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr  $130 \\ {\rm 135} \\ {\rm 140}$ 

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Lys Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 . 185 . 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

<210> 36

<211> 251

<212> PRT

<213> Homo sapiens

<400> 36

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His  $20 \\ 25 \\ 30$ 

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu beu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Ile Leu Thr Arg Tyr Val Phe Gln Tyr Phe 100 . 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Lys Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 37

<211> 251

<212> PRT

<213> Homo sapiens

<400> 37

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45 ,

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe
100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Lys Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 38

<211> 251

<212> PRT

<213> Homo sapiens

<400> 38

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Gly Tyr Tyr 100 105 110

Leu Ser Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr  $130 \hspace{1.5cm} 135 \hspace{1.5cm} 140 \hspace{1.5cm}$ 

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 . 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 . 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

<210> 39

<211> 251

<212> PRT

<213> Homo sapiens

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His
20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85. 90 . 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Ala Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245  $\phantom{0}$   $\phantom{0}$  250

<210> 40

<211> 251

<212> PRT

<213> Homo sapiens

<400> 40

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pró Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Val Trp
100 105 110

Val Ala Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 41

<211> 251

<212> PRT

<213> Homo sapiens

<400> 41

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 . 55

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys

85 90 95

Ala Arg Pro Phe Tyr Asp Ile Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 120 . 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 42

<211> 251

<212> PRT

<213> Homo sapiens

<400> 42

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val

45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe  $50 \hspace{1cm} 55 \hspace{1cm} 60$ 

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Lys Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 230 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 43

<211> 251

<212> PRT

<213> Homo sapiens

<400> 43

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

70 80 75 65 Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 90 Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110 Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 120 125 Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 150 145 Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 170 165 Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 185 180 Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 200 Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 215 220 Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 235 230 225 Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250 <210> 44 <211> 251 <212> PRT <213> Homo sapiens

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala

10

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$ 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Lys Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 . 230 . 230 . 240

<210> 45

<211> 251

<212> PRT

<213> Homo sapiens

<400> 45

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Arg Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg  $245 \hspace{1.5cm} \text{250}$ 

<210> 46

<211> 251

<212> PRT

<213> Homo sapiens

<400> 46

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 . 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Gly Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 47

<211> 251

<212> PRT

<213> Homo sapiens

<40.0> 47

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His  $20 \\ \hspace{1.5cm} 25 \\ \hspace{1.5cm} 30$ 

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Pro Arg Val 100 105 110

Ile Pro Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr  $130 \\ {\rm 135} \\ {\rm 140} \\ {\rm 140}$ 

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr
180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 48

<211> 250

<212> PRT

<213> Homo sapiens

<400> 48

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Cys Arg Pro His
100 105 110

Phe Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 130 135 140

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 145 150 155 160

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 165 170 175

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly
180 185 190

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 195 200 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 210 215 220

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 225 230 235 240

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 49

<211> 250

<212> PRT

<213> Homo sapiens

<400> 49

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Arg Cys Pro Tyr 100 105 110

Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 130 135 140

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 145 150 150 155 160

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala
165 170 175

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly
180 185 190

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 195 200 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 210 215 220

Phe Ala Met Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 225 230 235 240

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg \$245\$

<210> 50

<211> 250

<212> PRT

<213> Homo sapiens

<400> 50
Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His  $20 \\ \hspace{1.5cm} 25 \\ \hspace{1.5cm} 30$ 

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 . 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Arg Pro Asp 100 105 110

Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly 115 120 125

Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 130 135 140

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 145 150 150 155

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 165 170 175

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly
180 185 190

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 195 200 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 210 215 220

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 225 230 235 240

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 51

<211> 250

<212> PRT

<213> Homo sapiens

<400> 51 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His
20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Lys Ser Met Pro 100 105 110

Thr Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly 115 120 125

Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 130 135 140

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 145 150 150

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 165 170 175

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly 180 185 190

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 195 200 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 210 215 220

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe

225 230 235 240

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 52

<211> 250

<212> PRT

<213> Homo sapiens

<400> 52

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Pro Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Thr Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Pro Phe Leu Tyr 100 105 110

Cys Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly 115 120 125

Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 130 135 140

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 145 150 155 160

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 165 170 175

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly 180 185

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 195 200 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 210 215 220

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 225 230 235 240

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 53

<211> 250

<212> PRT

<213> Homo sapiens

<400> 53

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His
20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys  $85 \hspace{1cm} 90 \hspace{1cm} 95$ 

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Pro Val Pro Ser 100 · 105 110

Thr Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 130 135 140

Leu Thr Gln Ser Pro Asp Ala Leu Ser Leu Ser Pro Gly Glu Arg Ala

145 150 155 160

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 165 170 175

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly
. 180 185 190

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu
195 200 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 210 215 220

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 225 230 235 240

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg
245 250

<210> 54

<211> 250

<212> PRT

<213> Homo sapiens

<400> 54

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Gly Ile His Gly 100 105 110

Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly 115 120 125

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 130 135 140

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 145 150 150

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 165 170 175

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly
180 185 190

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu
195 200 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 210 215 220

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 225 230 230

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 55

<211> 251

<212> PRT

<213> Homo sapiens

<400> 55

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$ \$40\$ \$45\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Pro Cys Ser Pro 100 105 110

Pro Arg Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 56

<211> .250

<212> PRT

<213> Homo sapiens

<400> 56

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Cys Tyr Pro Pro
100 105 110

Ala Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly 115 120 125

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 130 135 140

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 145 150 150

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 165 170 175

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly
180 185 190

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 195 200 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 210 215 220

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 225 230 235

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 57

<211> 250

<212> PRT

<213> Homo sapiens

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Pro Leu Leu 100 105 110

Ser Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly 115 120 125

Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 130 135 140

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 145 150 150 160

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 165 170 175

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly 180 185 190

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 195 200 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 210 215 220

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe

225 230 235 240

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg  $245 \ \ \,$  250

<210> 58

<211> 250

<212> PRT

<213> Homo sapiens

<400> 58

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Ala Leu Tyr Arg 100 105 110

Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 130 135 140

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 145 150 150

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 165 170 175

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly
180 185 190

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 195 200 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 210 215 220

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 225 230 235 240

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 59

<211> 250

<212> PRT

<213> Homo sapiens

<400> 59

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Arg Ala Ser Phe 100 105 110

Ser Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 130 135 140

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala

145 150 155 160

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 165 170 175

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly
180 185 190

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 195 200 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 210 215 220

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 225 230 235 240

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 60

<211> 250

<212> PRT

<213> Homo sapiens

<400> 60

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 - 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Cys Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Cys Thr Pro Val 100 105 110

Pro Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 135

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 155 150

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 165 170

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly 180 - 185

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 200 195

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 215

Phe Ala Ala Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 235 230

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245

<210> 61

<211> 251

<212> PRT

<213> Homo sapiens

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40.

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 55 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Trp Pro Ser Phe 100 105 110

Phe Ser Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 62

<211> 250

<212> PRT

<213> Homo sapiens

<400> 62

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Thr Pro Arg Gly 100 105 110

Tyr Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 130 135 140

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 145 150 155 160

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 165 170 175

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly
180 185 190

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu . 195 200 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 210 215 220

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 225 230 235

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 63

<211> 250

<212> PRT

<213> Homo sapiens

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys  $85 \hspace{1cm} 90 \hspace{1cm} 95$ 

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Ser Ser Leu Leu 100 105 110

Ser Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly 115 120 125

Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 130 135 140

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 145 150 155 160

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 165 170 175

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly
180 185 190

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 195 200 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 210 215 220

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe

225 230 235 240

<210> 64

<211> 251

<212> PRT

<213> Homo sapiens

<400> 64

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala

1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Pro Leu Leu Pro 100 105 110

Leu Cys Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 . 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 65

<211> 251

<212> PRT

<213> Homo sapiens

<400> 65

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Pro Pro Pro Ser 100 105 110

Phe Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr
180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg
245 250

<210> 66

<211> 250

<212> PRT

<213> Homo sapiens

<400> 66

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His  $20 \\ 25 \\ 30$ 

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40  $^{\circ}$  45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys \$85\$ 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Pro Thr Ser Thr 100 105 110

Thr Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 130 135

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 145 150 150 150

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Thr 165 170 175

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly 180 185

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 195 200 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 210 215

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 225 230 230 240

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 67

<211> 251

<212> PRT

<213> Homo sapiens

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

75 80 70 65

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 90 85

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Ile Ser Cys Ser 105

Trp Ala Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 120 115

Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 135

Thr Leu Thr Gln Ser Leu Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 155 150

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 . 170

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 200

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 220 215

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 235 230 225

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 250 245

<210> 68

<212> PRT

<213> Homo sapiens

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala . 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 .

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

- Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60
- Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80
- Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95
- Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Ser Ala Leu Pro 100 100 105
- Pro Pro Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125
- Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135
- Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160
- Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175
- Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185
- Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205
- Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220
- Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 240
- Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 69

<211> 250

<212> PRT

<213> Homo sapiens

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Cys Arg His Leu 100 105 110

Phe Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 145 150 155 160

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 165 170 175

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly 180 185 190

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 195 200 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 210 215 220

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe

225 230 235 240

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 70 <211> 251

<212> PRT

<213> Homo sapiens

 $<\!400\!>70$  Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asp His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Val Ser Phe Pro

Ser Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 215 220 210

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 235 230

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245

<210> 71

<211> 251 <212> PRT

<213> Homo sapiens

<400> 71 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 25

Gly Val Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe - 55 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 70 65

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 90

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Met Gly Val Thr 105 100

Pro Ser Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 125 120 115

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 140 . 130 135

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

160 155 150 145

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 170 175 165

Ala Trp Tyr Gln Arg Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 215

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 230 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245

<210> 72

<211> 251

<212> PRT

<213> Homo sapiens

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 2.0

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 55 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 70 65

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Phe Arg Pro 105

Val Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 120 115

Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 135

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 155 160 150

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 170 175 165

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 200

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Ser Arg Thr 230 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg . 250 245

<210> 73

<210> 73 <211> 250 <212> PRT

<213> Homo sapiens

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 . 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Pro Ser Val Gly 100 105

Gly Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly 115 120 125

Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 130 135

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 165 170 175

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly 180 185 190

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 195 200 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 210 215 220

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 225 230 235

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 74

<211> 250

<212> PRT

<213> Homo sapiens

<400> 74
Gln Val Gln Leu Val Gln Pro Gly Val Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Pro Pro Thr Arg
100 105 110

His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly 115 120 125

Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 130 135 140

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 145 150 155 160

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 165 170 175

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly 180 185 190

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 195 200 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 210 215 220

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 225 230 235 240

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 75

<211> 250

<212> PRT

<213> Homo sapiens

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Arg Ser Arg 100 105 110

Asp Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly 115 120 125

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 130 135 140

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 145 150 150

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 165 170 175

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly 180 185 190

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 195 200 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 210 215 220

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe

240 235 230 225

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245

<210> 76

<211> 250

<212> PRT

<213> Homo sapiens

<400> 76

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 25

Gly Ile Ser Arg Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 40

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 55

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 70 ·

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Pro Leu Leu Pro 100 105

Pro Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120

Ser Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr Thr 135 . 130

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 145 150 155

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 165 170

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly 180 185 190

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 200

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 215 210

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 235 230

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 250 245

<210> 77

<211> 250

<212> PRT

<213> Homo sapiens

<400> 77

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Arg Cys Val 100 105

Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 120 125

Ser Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr Thr 135 140

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala

145 150 155 . 160

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 165 170 175

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly
180 185 190

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu
195 200 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 210 215 220

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 225 230 230 240

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 78

<211> 250

<212> PRT

<213> Homo sapiens

<400> 78

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 . 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val His Pro Ser Arg

Ser Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly 120 125 115

Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 135

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 155 150

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 170 / 165

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly 185 180

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 195 200

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 220 215 210

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 235 230

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 79

<211> 251

<212> PRT

<213> Homo sapiens

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 40 35

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Arg Leu Pro 100 105 110

Pro Gln Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 80

<211> 250

<212> PRT

<213> Homo sapiens

<400> 80 . Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1  $\phantom{0}$  5  $\phantom{0}$  10  $\phantom{0}$  15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35

- Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60
- Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80
- Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 95
- Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Gly Pro Tyr Gly 100 105 110
- Thr Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly 115 120
- Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 130 135
- Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 145 150 150 160
- Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 165 170 175
- Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly
  180 185 190
- Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Lys 195 200 205
- Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 210 215 220
- Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 225 230 235
- Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 81

<211> 250

<212> PRT

<213> Homo sapiens

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Thr Pro Cys 100 105

Thr Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly 115

Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 130 135 140

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 165 170 175

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly
180 185 190

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu
195 200 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 210 215 220

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe

240

235 230 225

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245

<210> 82

<211> 244

<212> PRT

<213> Homo sapiens

<400> 82

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg 10

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Asp Tyr 25

Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Asp Trp Val 40 35

Ser Ala Ile Thr Trp Asn Ser Gly His Ile Asp Tyr Ala Asp Ser Val 55 50

Glu Gly Arg Phe Ala Val Ser Arg Asp Asn Ala Lys Asn Ala Leu Tyr 70 65

Leu Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Val Tyr Tyr Cys

Thr Lys Ala Ser Tyr Leu Ser Thr Ser Ser Ser Leu Asp Asn Trp Gly 105 100

Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Ser Gly Gly 115

Gly Gly Ser Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro 130

Ser Ser Leu Ser Ala Ser Ile Gly Asp Arg Val Thr Ile Thr Cys Arg 150 155 145

Ala Ser Gln Gly Ile Arg Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro 165 170 175

Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala Ala Ser Thr Leu Gln Ser 190 185 180

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr 195 200 205

Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Val Ala Thr Tyr Tyr Cys 210 215 220

Gln Lys Tyr Asn Ser Ala Pro Tyr Ala Phe Gly Gln Gly Thr Lys Val 225 230 235 240

Glu Ile Lys Arg

<210> 83

<211> 251

<212> PRT

<213> Homo sapiens

<400> 83 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asp His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 .45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Thr Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 84

<211> 251

<212> PRT

<213> Homo sapiens

 $<\!\!400\!\!>$  84 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Gly Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Ile Pro Phe Leu
100 105 110

Pro Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 85

<211> 251

<212> PRT

<213> Homo sapiens

<400> 85

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu His Ile Tyr 100 105 110

Pro His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 230 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 86

<211> 251 '

<212> PRT

<213> Homo sapiens

Ser Val Lys Val Ser Cys Lys Val Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

- Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60
- Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80
- Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
  85 90 95
- Ala Arg Pro Phe Tyr Asp Thr Leu Thr Asn Tyr Val Phe Glu Tyr Tyr 100 105 110
- Ala Ser Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125
- Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr  $130 \,$   $135 \,$   $140 \,$
- Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 150 155
- Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175
- Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Met Tyr 180 185 190
- Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205
- Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220
- Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240
- Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 87

<211> 251

<212> PRT

<213> Homo sapiens

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Ile Leu Tyr Tyr 100 105 110

Leu His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 102

235 240 230 225

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 88

<211> 251

<212> PRT

<213> Homo sapiens

<400> 88

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 5 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 40

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr - 70

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 105

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 120 115

Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 140 130

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 155 150 145

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 170 165

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 185 180

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 200

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile-Ser Arg Leu Glu Pro Glu 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Pro Thr 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245

<210> 89

<211> 251

<212> PRT

<213> Homo.sapiens

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 10 15 1 5

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 25 20

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 40 35

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 55

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 75 , 70 .

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 90 85

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Met Tyr Phe 105 100

Pro His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 125 120 115

Gly Ser Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 135 140 130

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

150 155 160 145

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 215 220 210

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 230 235 240 225

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 90

<211> 251

<212> PRT

<213> Homo sapiens .

<400> 90

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 5

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 25

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 40 45 35

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 55

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 70 75 65 .

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 90 85

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Phe Phe Tyr 105 110 100,

Pro Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 . 250

<210> 91

<211> 251

<212> PRT

<213> Homo sapiens

<400> 91

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 185

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 225 220 .

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Val Ile Arg Arg 245 250

<210> 92

<211> 251

<212> PRT

<213> Homo sapiens

<400> 92

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 . 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Asp Tyr Tyr 100 105 110

Ala Ser Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr  $130\,$ 

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 93

<211> 251

<212> PRT

<213> Homo sapiens

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Gly Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75.

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Ile Pro Phe Leu 100 105 110

Pro Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 109

230 235 240 225

Phe Gly Gln Gly Thr Arg Leu Glu Ile Ser Arg 245 250

<210> 94

<211> 251

<212> PRT

<213> Homo sapiens

<400> 94

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 25

Ser Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 55

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 70

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 - 90

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 105

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 125 120

Gly Ser Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 135 130

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 155 145 150

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 1.70

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 200

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 235 230

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245

<210> 95

<211> 251

<212> PRT

<213> Homo sapiens

<400> 95

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 10

Ser Val Lys Val Ser Cys Lys Val Ser Gly Tyr Thr Phe Ser Asn His 25

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 60 55 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 70 75 80 65

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 - 90

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Glu Tyr Tyr 105 110 100

Ser Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly . 115 120 . 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

155 160 150 -145

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 235 240 230

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245

<210> 96

<211> 251

<212> PRT

<213> Homo sapiens

<400>.96

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 25 20

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 60 50 . 55

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 70 65

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 90

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 . 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115

Gly Ser Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 155 150

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 170 165

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 185 . 190 180

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 200 195

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser 'Arg Leu Glu Pro Glu 215

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 235 230 225

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 97

<211> 251

<212> PRT

<213> Homo sapiens

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 5 . 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Ala Phe Ser Asn His 25 20.

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35

Gly Trp Ile Ser Gly His Asp Asp Ser Ala Lys Tyr Ala Gln Lys Phe 55 60 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 150 155

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 98

<211> 251

<212> PRT

<213> Homo sapiens

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly Tyr Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Glu Phe Tyr 100 105 110

Leu Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 230 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 99

<211> 251

<212> PRT

<213> Homo sapiens

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Lys Arg 145 150 150

Ala Thr Leu Pro Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 . 170 . 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 100

<211> 250

<212> PRT

<213> Homo sapiens

<400> 100

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala

1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Pro Leu Asp 100 105 110

Ser Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 130 135 140

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 145 150 150

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala
165 170 175

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly
180 185 190

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 195 200

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 210 215 220

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 230 235 240

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245

<210> 101

<211> 251

<212> PRT

<213> Homo sapiens

<400> 101

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1.0

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 25 2.0

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 40

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Glu Tyr Ala Gln Lys Phe . 60 50 55

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr . 75

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 90 ` 85

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Tyr Phe Tyr 100 105

Pro Ser Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 120 125 115

Gly Ser Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 135 130

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

160 155 . 1,50 145

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 170 175 165

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 200 195

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 220 215

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245

<210> 102

<211> 251

<212> PRT

<213> Homo sapiens

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Asn Thr Ala Tyr 75' 65

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 90 85

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 105 100

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 120 115

Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 155 150

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 170 165

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 185 180

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu . 220 210 215

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 230 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245

<210> 103

<211> 251

<212> PRT

<213> Homo sapiens

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 15 ' 10 1 5

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 . 25

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 . 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

<210> 104

<211> 251

<212> PRT

<213> Homo sapiens

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Thr Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 105

<211> 251

<212> PRT

<213> Homo sapiens

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Glu Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 123

240 235 230 225

Phe Gly Gln Gly Thr Arg Leu Glu Val Lys Arg 245 250

<210> 106

<211> 251

<212> PRT

<213> Homo sapiens

<400> 106

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 55

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 75 70

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys . 85 , 90

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu His Tyr Tyr 105 100

Ala Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 125 120

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 135 130

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 150 . 155 145

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 170 165

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 230 240

Phe Gly Gln Gly Thr Arg Leu Glu IIe Lys Arg 245 250

<210> 107

<211> 250

<212> PRT

<213> Homo sapiens

<400> 107

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys  $85 \hspace{1cm} 90 \hspace{1cm} 95$ 

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Pro Pro Ser 100 105 110

Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly 115 120 125

Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 130 135 140

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala

145 150 155 160

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 165 170 175

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly 180 185 190

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 195 200 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 210 215 220

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 225 230 235 240

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 108

<211> 251

<212> PRT

<213> Homo sapiens

<400> 108

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95 ,

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Pro Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 . 250

<210> 109

<211> 251

<212> PRT

<213> Homo sapiens

<400> 109

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Arg Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 230 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 110

<211> 251

<212> PRT

<213> Homo sapiens

<400> 110
Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe . 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 230 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg
245 250

<210> 11:1

<211> 248

<212> PRT

<213> Homo sapiens

<400> 111 Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala Ser Val Lys  $1 \ 5 \ 10 \ 15$ 

Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His Gly Ile Ser 20 25 30

Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val Gly Trp Ile 35 40 45

Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe Gln Gly Arg 50 55 60

Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr Ile Glu Leu 65 70 75 80

Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys Ala Arg Pro 85 90 95

Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe Asp His Trp 100 105 110

Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly 115 120 , 125

Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr Thr Leu Thr 130 135 140

Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu 145 150 155 160

Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala Trp Tyr 165 170 175

Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly Thr Ser 180 185 190

Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu Ser Gly 195 200 205

Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp Phe Ala 210 215 220

Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe Gly Gln

225 230 235 240

Gly Thr Arg Leu Glu Ile Lys Arg

<210> 112

<211> 251

<212> PRT

<213> Homo sapiens

<400> 112

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala
1 5 10 . 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu His Tyr Tyr 100 105 110

Leu Tyr Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 150 155

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 . 185 . 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg
245 250

<210> 113

<211> 251

<212> PRT

<213> Homo sapiens

<400> 113

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Ile Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 170

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 230 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 114

<211> 251

<212> PRT

<213> Homo sapiens

<400> 114

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Ile Val Thr Val Ser Ser Gly Gly Gly 120

Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 135

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 155 150

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 185

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 200 205 195

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asp Thr Ser Pro Arg Thr 235 225 230

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245

<210> 115

<211> 251

<212> PRT

<213> Homo sapiens

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 5 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55

Gln Gly Arg Val Thr Met Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 230 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 116

<211> 251

<212> PRT

<213> Homo sapiens

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

- Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60
- Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 80
- Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95
- Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe
  100 105 110
- Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115
- Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140
- Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160
- Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175
- Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190
- Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205
- Glu Ser Gly Thr Asp Phe Thr Leu Ala Ile Ser Arg Leu Glu Pro Glu 210 215 220
- Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240
- Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 117

<211> 251

<212> PRT

<213> Homo sapiens

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His  $20 \\ \hspace{1.5cm} 25 \\ \hspace{1.5cm} 30$ 

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Asp Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Arg Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Ala Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Cys Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

230 240 235 225

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 250 245

<210> 118

<211> 251

<212> PRT

<213> Homo sapiens

<400> 118 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 40

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 55

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 75 70

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 · 90

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 105

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 120 115

Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 135 130

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 155 145 150

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 185 180

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Ser Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 . 250

<210> 119

<211> 251

<212> PRT

<213> Homo sapiens

<400> 119

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 \$135\$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Asn Arg 245 250

<210> 120

<211> 251

<212> PRT

<213> Homo sapiens

<400> 120

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125 .

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr . 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Val Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 . 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 121

<211> 251

<212> PRT

<213> Homo sapiens

<100× 121

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala.

1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His
20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe His Tyr Tyr
100 105 110

Pro Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 230 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 122

<211> 251

<212> PRT

<213> Homo sapiens

<400> 122

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

- Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60
- Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80
- Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95
- Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Pro Val Tyr 100 105 110
- Tyr Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125
- Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135
- Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
  145 150 155 160
- Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175
- Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190
- Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205
- Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu
  210 215 220
- Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 230 235
- Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 123

<211> 251

<212> PRT

<213> Homo sapiens

 $<\!400\!>$  123 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val

Gly Trp Ile Ser Gly His Gly Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu His Phe Ile 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

240 235 230 225

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245

<210> 124

<211> 251

<212> PRT

<213> Homo sapiens

<400> 124

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala . 5 . 10

Ser Val Lys Val Pro Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 25

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys · 95 90 85

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 , 105

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 120 115

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 185 190 180

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser . 200 195

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 215 210

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 235 230

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245

<210> 125

<211> 251

<212> PRT

<213> Homo sapiens

<400> 125

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 5 , 10

Ser Val Lys Val Pro Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 40

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 55 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 95 90 85

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 105 100

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly <sup>ا</sup> 120 115

Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 135 130

Thr Leu Thr Gln Cys Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 126

<211> 251

<212> PRT

<213> Homo sapiens

<400> 126

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala His Arg Leu Leu Met Tyr
180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Asp Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 127

<211> 251

<212> PRT

<213> Homo sapiens

<400> 127

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe His Tyr Tyr 100 105 110

Asp Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 150 155

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 128

<211> 251

<212> PRT

<213> Homo sapiens

<400> 128
Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Gly Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 129

<211> 251

<212> PRT

<213> Homo sapiens

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val His Glu Phe Phe 100 105 110

Ser Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

. <210> 130

<211> 251

<212> PRT

<213> Homo sapiens

<400> 130

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Ser Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 200

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 215

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245

<210> 131

<211> 251

<212> PRT

<213> Homo sapiens

<400> 131

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 25 2.0

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 55 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 70 65

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys . 90

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 · 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115

Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Lys Thr 135 130

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Gly Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 132

<211> 251

<212> PRT

<213> Homo sapiens

<400> 132

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly Arg Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 150 155

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg  $245 \ \ 250 \ \$ 

<210> 133

<211> 251

<212> PRT

<213> Homo sapiens

<400> 133

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 .5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

80 75 70 65

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 90 85

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 120 115

Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 135

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 150 , 155

Ala Thr Leu Ser Cys Arg Ala Ser Arg Ser Val Thr Arg Gly Trp Val 170 165

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 185

Gly Thr Ser Arg Arg Ala Ala Gly Val Pro Asp Arg Phe Ser Gly Ser 205 195 200

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 215 210

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 235 225

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245

<210> 134

<211> 251

<212> PRT

<213> Homo sapiens

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Thr 1 5

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 25 20 .

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

- Gly Trp Ile Ser Gly His Asp Gly Ser Thr Lys Tyr Ala Gln Lys Phe 50 55
- Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr
  65 70 75 80
- Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
  85 90 95
- Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110
- Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115
- Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135
- Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 150 155 160
- Ala Thr Leu Ser Cys Lys Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175
- Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185
- Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205
- Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220
- Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240
- Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 135

<211> 251

<212> PRT

<213> Homo sapiens

<400> 135 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 25

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val . 40

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 55

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 75

Ile Glu Leu Arg Ser Leu Lys Pro Asp Asp Thr Ala Val Tyr Tyr Cys 85 90

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 105

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 125 120 115

Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 135 130

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 155 145 150

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 170 165

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 200 195

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 158

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 136

<211> 251

<212> PRT

<213> Homo sapiens

<400> 136

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asp His  $20 \\ 25 \\ 30$ 

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 200 195

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 215

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 235 240 230

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245

<210> 137

<211> 251

<212> PRT

<213> Homo sapiens

<400> 137

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 70 65

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 105 100

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 135 130 ·

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Ala Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg
245 250

<210> 138

<211> 251

<212> PRT

<213> Homo sapiens

<400> 138

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His
20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Ala Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asn Arg Phe Ser Asp Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Tyr Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 139

<211> 251

<212> PRT

<213> Homo sapiens

<400> 139

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Arg Arg 245 250

<210> 140

<211> 250

<212> PRT

<213> Homo sapiens

<400> 140

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Arg Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His  $20 \\ 25 \\ 30$ 

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Ala Leu Asp 100 105 110

Leu Trp Gly Gln Gly Thr Met Val Asn Val Ser Ser Gly Gly Gly Gly 115 120 125

Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 130 140

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 145 150 155 160

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 165 170 175

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly
180 185 190

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu
195 200 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 210 225 220

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 225 230 235 240

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg

<210> 141

<211> 251

<212> PRT

<213> Homo sapiens

<400> 141

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gly Tyr Tyr 100 105 110

Ser Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 . 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Ile Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225

230

235

240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 142

<211> 251

<212> PRT

<213> Homo sapiens

<400> 142

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Gly Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 143

<211> 251

<212> PRT

<213> Homo sapiens

<400> 143

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Lys Tyr Tyr 100 105 110

Thr Asp Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 . 185 . 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 144

<211> 251

<212> PRT

<213> Homo sapiens

<400> 144

Gln Val Gln Leu Val Gln Ser Gly Val Glu Ala Arg Lys Pro Gly Ala
1 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 145

<211> 251

<212> PRT

<213> Homo sapiens

<400> 145

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His
20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

 65
 70
 75
 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Met His Ala Tyr 100 105 110

Pro Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Ser Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Gln Thr 225 230 235 240

<210> 146

<211> 251

<212> PRT

<213> Homo sapiens

<400> 146

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala . 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 . 40 45

- Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60 .
- Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80
- Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95
- Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe His Tyr Leu 100 105 110
- Pro Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125
- Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140
- Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 150 155 160
- Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175
- Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190
- Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205
- Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220
- Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240
- Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<sup>&</sup>lt;210> 147

<sup>&</sup>lt;211> 251

<sup>&</sup>lt;212> PRT

<213> Homo sapiens

<400> 147

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Pro Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 148

<211> 251

<212> PRT

<213> Homo sapiens

<400> 148

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His
20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Cys Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Glu Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Thr Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Asp Gln Ala Pro Arg Leu Leu Ile Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Asp Ser 195 . 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 149

<211> 251

<212> PRT

<213> Homo sapiens

<400> 149

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Ala Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 . 250

<210> 150

<211> 251

<212> PRT

<213> Homo sapiens

<400> 150

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Glu Tyr Phe 100 105 110

Ser Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 151

<211> 251

<212> PRŤ

<213> Homo sapiens

<400> 151

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Cys Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys  $85 \hspace{1.5cm} 90 \hspace{1.5cm} 95$ 

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg
245 250

<210> 152

<211> 251

<212> PRT

<213> Homo sapiens

<400> 152

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His  $20 \\ \hspace{1.5cm} 25 \\ \hspace{1.5cm} 30$ 

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Phe Tyr Tyr 100 105 110

Pro Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 153

<211> 251

<212> PRT

<213> Homo sapiens

<400> 153

Gln Val Gln Leu Val Gln Pro Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$ 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 154

<211> 251

<212> PRT

<213> Homo sapiens

<400> 154

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 .10 .15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly Arg Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Ala Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asn Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu
210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu IIe Lys Arg 245 250

<210> 155

<211> 251

<212> PRT

<213> Homo sapiens

<400> 155

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$ 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys His Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr  $130 \,\,$   $135 \,\,$   $140 \,\,$ 

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 . 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr
180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 . 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 156

<211> 251

<212> PRT

<213> Homo sapiens

<400> 156

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$ 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Val Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Asp Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Arg Arg 245 250

<210> 157

<211> 251

<212> PRT

<213> Homo sapiens

<400> 157

Gln Ile Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

.Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Asp Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 158

<211> 251

<212> PRT

<213> Homo sapiens

<400> 158

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Arg Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 159

<211> 251

<212> PRT

<213> Homo sapiens

<400> 159

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Phe Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 160

<211> 251

<212> PRT

<213> Homo sapiens

<400> 160

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala  $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$ 

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Ala Tyr Tyr 100 105 110

Pro Asp Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

- Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220
- Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 161

<211> 251

<212> PRT

<213> Homo sapiens

<400> 161

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

- Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45
- Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
  50 55 60
- Gln Gly Arg Val Thr Ile Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80
- Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
  85 90 95
- Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110
- Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125
- Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr  $130\,$
- Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg . 245 250

<210> 162

<211> 251

<212> PRT

<213> Homo sapiens

<400> 162

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His
20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185. 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Asp Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg
245 250

<210> 163

<211> 251

<212> PRT

<213> Homo sapiens

<400> 163

Gln Val Gln Leu Val Gln Ser Gly Val Glu Glu Lys Lys Pro Gly Ala 1 5 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr  $130\,$ 

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Gly Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 230 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 164

<211> 244

<212> PRT

<213> Homo sapiens

<400> 164

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Asp Tyr 20 25 30

Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Asp Trp Val 35 40 45

Ser Ala Ile Thr Trp Asn Ser Gly His Ile Asp Tyr Ala Asp Ser Val 50 60

Glu Gly Arg Phe Ala Val Ser Arg Asp Asn Ala Lys Asn Ala Leu Tyr 65 75 80

Leu Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Thr Lys Ala Ser Tyr Leu Ser Thr Ser Ser Ser Leu Asp Asn Trp Gly 100 105 110

Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly 115 120 125

Gly Gly Ser Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro 130 135 140

Ser Ser Leu Ser Ala Ser Ile Gly Asp Arg Val Thr Ile Thr Cys Arg
145 150 155 160

Ala Ser Gln Gly Ile Arg Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro 165 170 175

Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala Ala Ser Thr Leu Gln Ser 180 185 190

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr 195 200 205

Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Val Ala Thr Tyr Tyr Cys 210 215 220

Gln Lys Tyr Asn Ser Ala Pro Tyr Ala Phe Gly Gln Gly Thr Lys Val 225  $\phantom{\bigg|}230\phantom{\bigg|}$   $\phantom{\bigg|}$  235  $\phantom{\bigg|}$  240

Glu Ile Glu Arg

<210> 165

<211> 251

<212> PRT

<213> Homo sapiens

<400> 165
Gln Val Gln Leu Val Gln Ser Gly Val Lys Val Lys Lys Pro Gly Ala
1 5 10 15

- Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30
- Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45
- Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60
- Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80
- Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95
- Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Pro Val Tyr 100 105 110
- Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125
- Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr  $130 \,$   $135 \,$   $140 \,$
- Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160
- Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175
- Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190
- Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205
- Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220
- Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg
245 250

<210> 166

<211> 251

<212> PRT

<213> Homo sapiens

<400> 166

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1  $\phantom{-}$  10  $\phantom{-}$  15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Ala His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr  $130\,$   $135\,$   $140\,$ 

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg
245 250

<210> 167

<211> 251

<212> PRT

<213> Homo sapiens

<400> 167

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 . 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Gly Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 168

<211> 251

<212> PRT

<213> Homo sapiens

<400> 168

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His
20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105  $^{\circ}$  110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asn Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 169

<211> 251

<212> PRT

<213> Homo sapiens

<400× 169

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 . 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr
180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Leu Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 170

<211> 251

<212> PRT

<213> Homo sapiens

<400> 170

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His  $20 \\ 25 \\ 30$ 

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

- Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60
- Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80
- Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95
- Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Ile Phe Tyr Tyr 100 105 110
- Pro Thr Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125
- Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 140
- Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160
- Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175
- Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Met Tyr 180 185 190
- Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205
- Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220
- Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240
- Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 171

<211> 251

<212> PRT

<213> Homo sapiens

<400> 171

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr
130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg
245 250

<210> 172

<211> 251

<212> PRT

<213> Homo sapiens

<400> 172

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys \$85\$ 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Glu Val Tyr 100 105 110

His Pro Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 173

<211> 251

<212> PRT

<213> Homo sapiens

<400> 173

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1  $\phantom{000}5\phantom{000}$  15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Ala Pro Leu 100 105 110

Val Thr Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 174

<211> 251

<212> PRT

<213> Homo sapiens

<400> 174

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His  $20 \\ \hspace{1.5cm} 25 \\ \hspace{1.5cm} 30$ 

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys

85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu His Ala Tyr 100 105 110

Ala Phe Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 175

<211> 251

<212> PRT .

<213> Homo sapiens

<400> 175

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His
20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Gly Tyr

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala His Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Ala Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 176

<211> 251

<212> PRT

<213> Homo sapiens

<400> 176

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His  $20 \hspace{1cm} 25 \hspace{1cm} 30$ 

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Ile Leu Tyr Tyr 100 105 110

Leu His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr  $130\,$ 

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Gln Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 177

<211> 251

<212> PRT

<213> Homo sapiens

<400> 177

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Glu Phe Leu 100 105 110

Pro Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr , 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 207

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 178

<211> 251

<212> PRT

<213> Homo sapiens

<400> 178

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60.

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Arg Pro Phe Tyr 100 105 110

Ala His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240 .

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg
245 250

<210> 179

<211> 251

<212> PRT

<213> Homo sapiens

<400> 179

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr
130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Gly Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg
245 250

<210> 180

<211> 251

<212> PRT

<213> Homo sapiens

<400> 180

Gln Ala Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu His Phe Tyr 100 105 110

Arg Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 181

<211> 251

<212> PRT

<213> Homo sapiens

<400> 181

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Val Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 182

<211> 251

<212> PRT

<213> Homo sapiens

<400> 182

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Ile Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 183

<211> 251

<212> PRT

<213> Homo sapiens

<400> 183

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Gly Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val His Glu Phe Phe 100 105 110

Ser Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg
245 250

<210> 184

<211> 251

<212> PRT

<213> Homo sapiens

<400> 184

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Arg Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Met Gln Phe Phe 100 105 110

Pro Thr Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 185

<211> 251

<212> PRT

<213> Homo sapiens

<400> 185

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe  $50 \ \cdot \ 55 \ 60$ 

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Ser Phe Tyr 100 105 110

Pro Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr  $130\,$ 

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr
180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 186

<211> 251

<212> PRT

<213> Homo sapiens

<400> 186

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Tyr Tyr Tyr 100 105 110

Ala Phe Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr  $130 \,$   $135 \,$   $140 \,$ 

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 .170 175.

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Leu Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Ala Gly Val Pro Asp Arg Phe Ser Asp Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Cys Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 187

<211> 251

<212> PRT

<213> Homo sapiens

<400> 187

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ser His Arg Leu Leu Met Tyr
180 185 190

Gly Thr Phe Arg Arg Pro Ser Gly Val Pro Asp Arg Phe Ser Asp Ser 195 200 205

Glu Ser Gly Thr Asp Phe Ser Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Ser Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 230 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg

<210> 188

<211> 251

<212> PRT

<213> Homo sapiens

<400> 188

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His  $20 \\ \hspace{1.5cm} 25 \\ \hspace{1.5cm} 30$ 

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val · 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Asp Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr  $130\,$   $135\,$   $140\,$ 

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 . 250

<210> 189

<211> 251

<212> PRT

<213> Homo sapiens '

<400> 189

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$ 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Lys Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe  $\cdot$  100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr  $130\,$ 

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 . 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 190

<211> 251

<212> PRT

<213> Homo sapiens

<400> 190

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu His Phe Tyr 100 105 110

Pro Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 . 120 . 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 191

<211> 251

<212> PRT

<213> Homo sapiens

<400> 191

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Gln Tyr Tyr 100 105 110

Val Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly . 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 192

<211> 251

<212> PRT

<213> Homo sapiens

<400> 192

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$ 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Leu Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Ala 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg \$245\$

<210> 193

<211> 251

<212> PRT

<213> Homo sapiens

<400> 193

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr  $130\,$ 

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Val Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg  $245 \ \ 250 \ \$ 

<210> 194

<211> 251

<212> PRT

<213> Homo sapiens

<400> 194

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His  $20 \hspace{1cm} 25 \hspace{1cm} 30$ 

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Val Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 . 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 195

<211> 251

<212> PRT

<213> Homo sapiens

<400> 195

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe
100 105 110

Asp Tyr Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 196

<211> 251

<212> PRT

<213> Homo sapiens

<400> 196

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Die Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Pro Val Trp
100 105 110

Val Ser Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr
130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Asp Gln Ala Ser Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Ser Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 197

<211> 251

<212> PRT

<213> Homo sapiens

<400> 197

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His
20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe
100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr
130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Thr Thr Gly Val Pro Gly Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 198

<211> 251

<212> PRT

<213> Homo sapiens

<400> 198

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Gly Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Pro Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 199

<211> 251

<212> PRT

<213> Homo sapiens

<400> 199

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Tyr Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245

<210> 200

<211> 251

<212> PRT

<213> Homo sapiens

<400> 200

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Val Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Åla Leu Glu Thr 130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 201

<211> 251

<212> PRT

<213> Homo sapiens

<400> 201

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 . 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys

85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Ile Glu Tyr Tyr 100 105 110

Pro Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr
180 185 190

Gly Thr Ser Arg Arg Thr Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 . 205

Glu Ser Gly Thr Asp Phe Thr Leu Ser Ile Ser Arg Leu Glu Pro Glu 210 215 , 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Val Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 202

<211> 251

<212> PRT

<213> Homo sapiens

<400> 202

Gln Val Gln Leu Val Gln Ser Gly Val Glu Ala Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His
20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Pro Leu Ser Pro Gly Glu Arg 145 150 155

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 203

<211> 251

<212> PRT

<213> Homo sapiens

<400> 203

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10  $\cdot$  15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$ 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Glu Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu His Tyr Leu 100 105 110

Pro Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Ala Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

<210> 204

<211> 251

<212> PRT

<213> Homo sapiens

<400> 204

Gln Val Gln Leu Val Gln Ser Gly Val Gly Val Lys Lys Pro Gly Ala

1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 205

<211> 251

<212> PRT

<213> Homo sapiens

<400> 205

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His  $20 \\ 25 \\ 30$ 

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 . 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Gly 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215. 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230  $\cdot$  235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg
245 250

<210> 206

<211> 251

<212> PRT

<213> Homo sapiens

<400> 206

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His  $20 \\ 25 \\ 30$ 

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

- Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60
- Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80
- Ile Glu Leu Arg Ser Leu Lys Pro Asp Asp Thr Ala Val Tyr Tyr Cys
  85 90 95
- Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe His Phe Tyr 100 105 110
- Pro Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125
- Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140
- Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 150 155
- Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175
- Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190
- Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205
- Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220
- Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 240
- Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<sup>&</sup>lt;210> 207

<sup>&</sup>lt;211> 251

<sup>&</sup>lt;212> PRT

<213> Homo sapiens

<400> 207

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Ala Ala Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 208

<211> 251

<212> PRT

<213> Homo sapiens

<400> 208

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Glu Ala Phe  $\cdot$  100 105 110

Ser Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr  $130 \,$   $135 \,$   $140 \,$ 

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Val Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 209

<211> 251

<212> PRT

<213> Homo sapiens

<400> 209

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His  $20 \hspace{1cm} 25 \hspace{1cm} 30$ 

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gly Phe Tyr 100 105 110

Pro Phe Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Met Tyr
180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Gly Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 210

<211> 251

<212> PRT

<213> Homo sapiens

<400> 210

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Ile Thr Arg Gly Trp Val 165 . 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Ser Arg Leu Leu Met Tyr 180 185 190

Gly Ser Ser Arg Arg Ala Ala Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Ser Ala Val Tyr Cys Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 211

<211> 251

<212> PRT

<213> Homo sapiens

<400> 211

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 . 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Ile Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Pro Ser Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 212

<211> 251

<212> PRT

<213> Homo sapiens

<400> 212

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn-His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$ 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Trp Tyr Tyr 100 105 110

Gln Asp Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu . 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 213

<211> 251

<212> PRT

<213> Homo sapiens

<400> 213

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60 .

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Ile Pro Phe Tyr 100 105 110

Pro Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 214

<211> 251

<212> PRT

<213> Homo sapiens

<400> 214

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 . 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130  $$135\$ 

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Ala Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 215

<211> 251

<212> PRT

<213> Homo sapiens

<400> 215

Gln Val Gln Leu Val Gln Ser Glu Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$ 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr  $130\,$ 

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr
180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 · 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 216

<211> 251

<212> PRT

<213> Homo sapiens

<400> 216

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Ser Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 . 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245

<210> 217

<211> 251

<212> PRT

<213> Homo sapiens

<400> 217

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys

85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Glu Tyr Phe 100 105 110

Pro Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr  $130 \\ \hspace{1.5cm} 135 \\ \hspace{1.5cm} 140$ 

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg

<210> 218

<211> 251

<212> PRT

<213> Homo sapiens

<400> 218

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His  $20 \\ \hspace{1.5cm} 25 \\ \hspace{1.5cm} 30$ 

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys \$85\$ 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Glu Phe Phe 100 105 110

Pro Ala Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 219

<211> 251

<212> PRT

<213> Homo sapiens

<400> 219

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His
20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Ile Glu Tyr Leu 100 105 110

Pro Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glụ Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 220

<211> 251

<212> PRT

<213> Homo sapiens

<400> 220

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu His Tyr Tyr 100 105 110

Ser Ala Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr  $130 \hspace{1.5cm} 135 \hspace{1.5cm} 140 \hspace{1.5cm}$ 

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 221

<211> 251

<212> PRT

<213> Homo sapiens

<400> 221

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Arg Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His
20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Phe Tyr Tyr 100 105 110

Thr Ala Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 222

<211> 251

<212> PRT

<213> Homo sapiens

<400> 222

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu His Tyr Leu 100 105 110

Pro Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 223

<211> 251

<212> PRT

<213> Homo sapiens

<400> 223

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His
20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe  $50 \,\,\,$ 

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 . 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp. Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr
130 . 135 140

Thr Leu Thr Gln Ser Pro Asp Ala Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg  $245 \hspace{1.5cm} 250 \hspace{1.5cm}$ 

<210> 224

<211> 251

<212> PRT

<213> Homo sapiens

<400> 224

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn Tyr 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 · 140

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 . 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 225

<211> 251

<212> PRT

<213> Homo sapiens '

<400> 225

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Met His Tyr Tyr 100 105 110

Pro Thr Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145. 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 226 ·

<211> 251

<212> PRT

<213> Homo sapiens

<400> 226

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His
20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Leu Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr  $130 \,$   $135 \,$   $140 \,$ 

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 227

<211> 251

<212> PRT

<213> Homo sapiens

<400> 227

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Gln Tyr Phe 100 . 105 110

Arg Tyr Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 . 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 228

<211> 251

<212> PRT

<213> Homo sapiens

<400> 228

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Gln Val Phe 100 105 110

Asp Thr Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val , 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 229

<211> 251

<212> PRT

<213> Homo sapiens

. <400> 229

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala. Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Val Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 . 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg
245 250

<210> 230

<211> 251

<212> PRT

<213> Homo sapiens

<400> 230

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 . 105 110

Asp His Trp Gly Gln Gly Ala Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130  $\,$  135  $\,$  140  $^{\prime}$ 

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 231

<211> 251

<212> PRT

<213> Homo sapiens

<400> 231

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Asp Tyr Tyr 100 105 110

Ser Ser Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr
130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr
180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230

235

240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg
245 250

<210> 232

<211> 251

<212> PRT

<213> Homo sapiens

<400> 232

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Ala Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 233

<211> 251

<212> PRT.

<213> Homo sapiens

<400> 233

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$ 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Arg Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 234

<211> 251

<212> PRT

<213> Homo sapiens

<400> 234

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lýs Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Pro Phe Tyr 100 105 110

Pro His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg

<210> 235

<211> 251

<212> PRT

<213> Homo sapiens

<400> 235

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala  $1 \hspace{1.5cm} 5 \hspace{1.5cm} 10 \hspace{1.5cm} 15$ 

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 . 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

 65
 70
 75
 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Ile Gly Phe Tyr 100 105 110

Pro Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr
180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 236

<211> 251

<212> PRT

<213> Homo sapiens

<400> 236

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 . 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Ser His  $20 \\ 25 \\ 30$ 

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr  $\cdot$  65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 237

<211> 251

<212> PRT

<213> Homo sapiens

<400> 237

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His
20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Met Asp Phe Tyr 100 105 110

Ser Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 277

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 238

<211> 251

<212> PRT

<213> Homo sapiens

<400> 238

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Ile Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135, 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 239

<211> 251

<212> PRT

<213> Homo sapiens

<400> 239

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 240

<211> 251

<212> PRT

<213> Homo sapiens

<400> 240

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His  $20 \hspace{1cm} 25 \hspace{1cm} 30$ 

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp. Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Pro Phe Tyr 100 105 110

Ala Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 . 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Pro Thr 225 230 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 241

<211> 251

<212> PRT

<213> Homo sapiens

<400> 241

Gln Val Gln Leu Val Gln Ala Ala Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg
245 250

<210> 242

<211> 251

<212> PRT

<213> Homo sapiens

<400> 242

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 . 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Ala Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 243

<211> 251

<212> PRT `

<213> Homo sapiens

<400> 243

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Gly Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe
100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Ser Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg ·245 250

<210> 244

<211> 251

<212> PRT

<213> Homo sapiens

<400> 244

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Pro Tyr Leu 100 105 110

Thr His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 245

<211> 251

<212> PRT

<213> Homo sapiens

<400> 245

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$ 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Asn Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr  $130\,$ 

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195  $\phantom{-}200$   $\cdot\phantom{-}205$ 

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 246

<211> 251

<212> PRT

<213> Homo sapiens

<400> 246

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Asn Gly Gly Gly 120

Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 150

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 170 165

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 185

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 200

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 215

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 230

Phe Gly Gln Gly Thr Arg Leu Glu Val Lys Arg 245

<210> 247 <211> 251

<212> PRT

<213> Homo sapiens

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 

Ser Val Lys Val Ser Cys Glu Ala Ser Gly Tyr Thr Phe Ser Asn His 20

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 , 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 248

<211> 251

<212> PRT

<213> Homo sapiens

<400> 248

Gln Val Gln Leu Val Gln Ser Val Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser . 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 , 250

<210> 249

<211> 251

<212> PRT

<213> Homo sapiens

<400> 249

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Asn Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg \$245\$

<210> 250

<211> 251

<212> PRT

<213> Homo sapiens

<400> 250

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His  $20 \hspace{1cm} 25 \hspace{1cm} 30$ 

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Ala Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 251

<211> 251

<212> PRT

<213> Homo sapiens

<400> 251

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Gly Phe Tyr 100 105 110

Pro Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 252

<211> 251

<212> PRT

<213> Homo sapiens

<400> 252

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His
20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys

85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu His Tyr His 100 105 110

Thr His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 230 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 253

<211> 251

<212> PRT

<213> Homo sapiens

<400> 253

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His
20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Asp Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Ala Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 254

<211> 251

<212> PRT

<213> Homo sapiens

<400> 254

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Asn Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Gly Ser Cys Lys Ala Tyr Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Asn Asp His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Tyr Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Ile His Phe Leu 100 105 110

Pro Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 . 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 230 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 255

<211> 251

<212> PRT

<213> Homo sapiens

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Gly Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70. 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Ile Pro Phe Leu 100 105 110

Pro Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 298

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 256

<211> 251

<212> PRT

<213> Homo sapiens

<400> 256

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Ala Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 257

<211> 251

<212> PRT

<213> Homo sapiens

<400> 257

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 · 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 258

<211> 251

<212> PRT

<213> Homo sapiens

<400> 258

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Glu Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Arg Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 259

<211> 251

<212> PRT

<213> Homo sapiens ·

<400> 259

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Glý Tyr Thr Phe Ser Asn His .

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Met His Tyr Leu 100 105 110

Pro Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr  $130 \,$   $135 \,$   $140 \,$ 

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 260

<211> 251

<212> PRT

<213> Homo sapiens

<400> 260

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

- Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60
- Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr
  65 70 75 80
- Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
  85 90 95
- Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Glu Phe Phe 100 105 110
- Ser His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125
- Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140
- Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 150 155 160
- Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175
- Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190
- Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205
- Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220
- Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240
- Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg  $$245\ . \ \ 250$

<210> 261

<211> 244

<212> PRT

<213> Homo sapiens

Ser Leu Arg Leu Ser Cys Ala Gly Ser Gly Phe Thr Phe Asp Asp Tyr
20 25 30

Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Asp Trp Val
35 40 45

Ser Ala Ile Thr Trp Asn Ser Gly His Ile Asp Tyr Ala Asp Ser Val 50 55 60

Glu Gly Arg Phe Ala Val Ser Arg Asp Asn Ala Lys Asn Ala Leu Tyr 65 70 75 80

Leu Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Thr Lys Ala Ser Tyr Leu Ser Thr Ser Ser Ser Leu Asp Asn Trp Gly 100 105 110

Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly 115 120 125

Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro

Ser Ser Leu Ser Ala Ser Ile Gly Asp Arg Val Thr Ile Thr Cys Arg 145 150 155 160

Ala Ser Gln Gly Ile Arg Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro 165 170 175

Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala Ala Ser Thr Leu Gln Ser 180 185 190

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr 195 . 200 205 .

Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Val Ala Thr Tyr Tyr Cys 210 215 220

Gln Lys Tyr Asn Ser Ala Pro Tyr Ala Phe Gly Gln Gly Thr Lys Val